

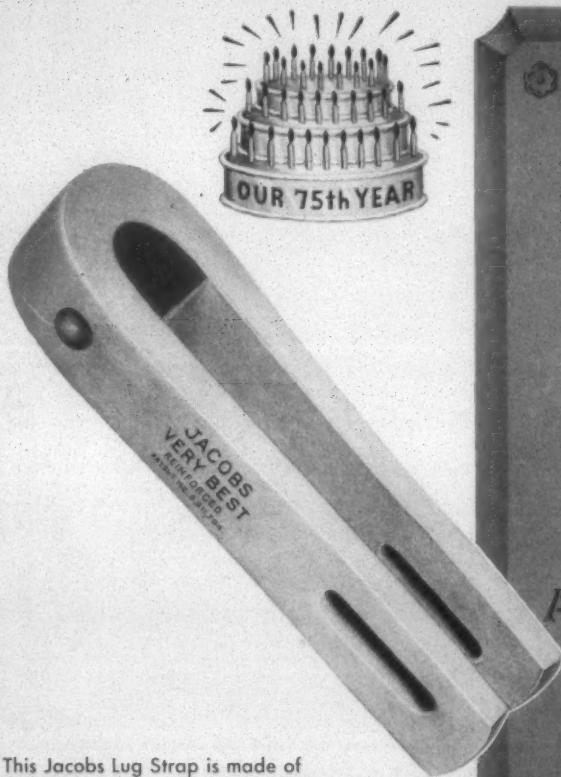
TEXTILE BULLETIN



VOL. 66

JULY 15, 1944

NO. 10



This Jacobs Lug Strap is made of best quality duck, specially reinforced at points of wear and stress, and is fused with special hide glue.

Like all Jacobs products, the Reinforced "Verybest" Lug Strap is a result of 75 years in loom accessory manufacture. Experienced weavers demand them.

JACOBS

REINFORCED "VERYBEST"
LUG STRAP

★

A LOGICAL RESULT OF 75 YEARS
CONSTANT IMPROVEMENT
AND RESEARCH

★

E. H. JACOBS MFG. CO.

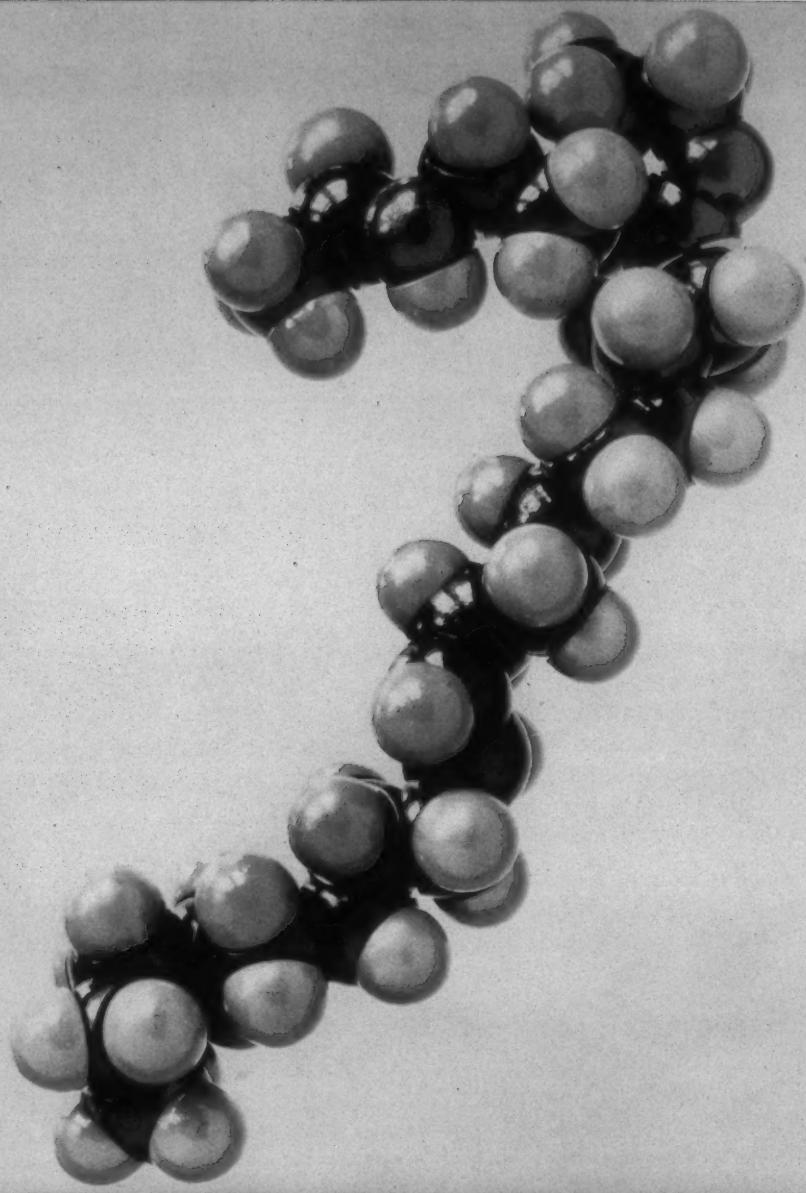
EST. 1869

DANIELSON, CONN. CHARLOTTE, N.C.

Improved Loom Mechanisms Up to 160 picks per minute Advent of Automatic Looms 185 picks per minute X Model Looms — 195 picks per minute New X-2 Looms — 212 picks per minute Post-war minimum, 212 picks per minute

1870 1880 1890 1900 1910 1920 1930 1940 Post-war

JACOBS PRODUCTS MEET
EVERY LOOM SPEED REQUIREMENT



A constituent of Onyxan
2-(8-heptadecenyl) N-acetamidoethyl imidazoline

THE ONYXSAN MOLECULE . . .

The model above represents a constituent of Onyxan enlarged approximately 60,000,000 times. It also represents the culmination of long painstaking research which included synthesizing and evaluating a great many chemical compounds before the most effective arrangements of atoms was obtained. From this research came a complete line of Onyxan cationic finishing agents whose superiority for special applications has been fully recognized by the textile industry.

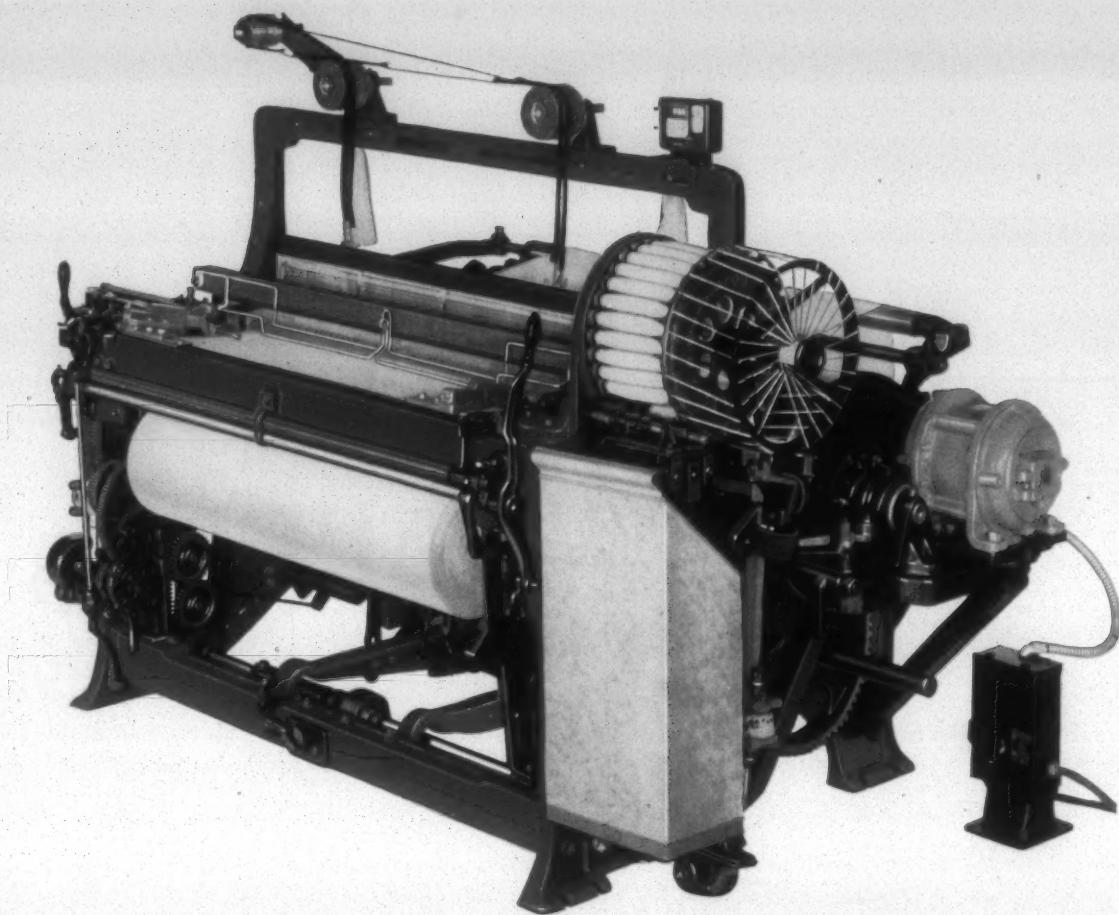
Your inquiries are solicited.

ONYX OIL & CHEMICAL COMPANY
JERSEY CITY, N.J.

PROVIDENCE · CHARLOTTE · CHICAGO · LOS ANGELES · MONTREAL · TORONTO

Published Semi-Monthly by Clark Publishing Company, 218 W. Morehead St., Charlotte, N. C. Subscription \$1.50 per year in advance. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.

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This is our Improved X-2 Model

Along with our All-out War Production Job some of our engineers were free to continue development on the X-2 Model Loom which we brought out just before the war started

The result is a wonderful improvement—the Best Loom We Have Ever Built

Now that a limited number of these Improved X-2 Looms are going into production under our Reconversion Program we anticipate Lower Maintenance Cost and Even Higher Speed than on previous High Speed Looms

DRAPER CORPORATION

Hopedale Massachusetts

Atlanta Georgia

Spartanburg S C

LOOK CLOSELY - IS THIS
YOUR POST-WAR PICTURE?

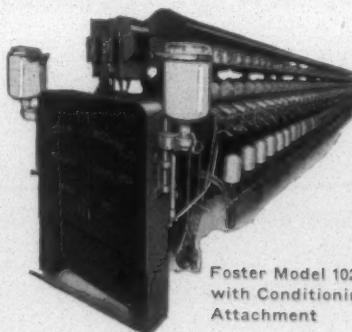
THIS is a story of a plant whose post-war future looked rosy . . . business was tremendous; product quality tops . . . then suddenly the war ended; conditions changed. This plant lacked adaptability to meet new demands and obsolescence claimed another victim.

You can avoid this very real danger by installing flexible equipment NOW, which should include the Foster Model 102 with a . . .

7-WAY FLEXIBILITY

- 1 It will wind any kind and any count of staple yarn from fine-combed cotton or rayon for tropical fabrics to heavy wool yarns for arctic cloths.
- 2 It will wind a straight base cone for warping or a convex base cone for knitting with a simple adjustment.
- 3 It will produce 9 different angles of wind from 9° to 18°. Important if you radically change your count or type of yarn.
- 4 It will wind package dyed yarn, even if damp. No jumping out of guides.
- 5 It will wind emulsion treated yarn. In fact, it is frequently equipped with an emulsion attachment.
- 6 Changeovers from cones to tubes, or vice versa, are comparatively inexpensive.
- 7 One side can wind cones and the other tubes, if desired.

• • •



Foster Model 102
with Conditioning
Attachment

Foster Machine Co.

WESTFIELD, MASS.

Southern Office
Johnston Bldg., Charlotte, N. C.

FOSTER MODEL 102

FOR WINDING COTTON • WOOL • WORSTED • MERINO • MERCERIZED • SPUN SILK AND SPUN RAYON YARNS

RAYON REPORTS



Published Monthly by American Viscose Corporation, New York, N. Y.

JULY, 1944

A.V.C. RESEARCH DEVELOPS NEW HOSIERY YARN SIZE

AN IMPROVED size for processing rayon hosiery yarns, Avconit No. 4, has been developed by the Textile Research and Chemical Research Departments of the American Viscose Corporation.

Avconit No. 4 is a synthetic wax blend applied in a solvent. It is white in color and does not discolor upon repeated heatings. It has a high melting point, which facilitates handling under high temperature conditions.

Tests show that Avconit No. 4 allows yarns to be handled more easily in the throwing plant. Its high degree of self-emulsifiability greatly increases ease of scouring and makes it particularly adaptable to the one-bath method of scouring and dyeing.

The principal functions performed by Avconit No. 4 are to provide adequate yarn lubrication... to hold the yarn twist during knitting... to

protect the yarn against damage at each step of throwing and hosiery manufacture... and to facilitate further handling, such as seaming and looping, by holding the fabric shape. It also helps to form a clear stitch, is easy to apply and remove, and is not corrosive or abrasive to knitting machinery.

Before it was made commercially available, Avconit No. 4 was given exhaustive tests on commercial hosiery machinery in the American Viscose Corporation's Textile Research Department at Marcus Hook, Pa., and in commercial throwing plants and hosiery mills. The tests were made at each step of the yarn's manufacture into hosiery, and on all types of rayon.

The new product will be manufactured and distributed by the Atlas Powder Company, Wilmington, Del.

EDUCATIONAL PROGRAM ON RAYON

The new consumer educational program on rayon, which has been conducted by



the American Viscose Corporation, since October 1942, is meeting with excellent response. The over-all purpose of the program is to substitute accurate information for the erroneous ideas that have grown up with rayon.

Under this program, one new leaflet is prepared each month. Its subject is also adapted to a radio script, and a news release for the women's pages of newspapers, complete with mats and photos. This material is sent to radio stations, news syndicates, newspapers, clubs, schools, colleges, various U. S. Government bureaus and the educational departments of retail stores.

Typical topics are "This Is the Way to Wash Your Rayon," "How to Care for

Rayon," "Tips on Sewing with Rayon," and "Simple Rules for the Care of Spun Rayon and Wool Blended Fabrics."

The program is entirely non-commercial and is not tied up with any trade-mark promotion. The information is not copyrighted, because the American Viscose Corporation feels that it should be available for general use.

NEW USE FOR VINYON**

"Vinyon" is now being used as packing material in pipe lines carrying the hydro-fluoric acid for the manufacture of high-octane gasoline. Vinyon is well suited for this purpose, as for industrial filter cloths, because of its exceptional ability to resist strong acids and alkalies, such as sulphuric, nitric and hydrofluoric acid, aqua regia, caustic soda and potash.

COLLINS LOOM WORKS NOW "AVECO, INC."

The American Viscose Corporation has changed the name of its subsidiary, Collins Loom Works, to Aveco, Inc. This subsidiary, acquired in 1943, is carrying on research and development work on the tricot manufacturing technique.

**T. M.—C. & C. C. C.

MAKE USE OF 4-PLY SERVICE

- 1 **PRODUCT RESEARCH**
Helps you get the right yarn.
- 2 **FABRIC DEVELOPMENT**
Helps you design new fabrics.
- 3 **TEXTILE RESEARCH**
Helps solve production and finishing problems.
- 4 **"CROWN" TESTED**
Helps provide scientific selling facts.

AMERICAN VISCOSÉ CORPORATION

Producer of
CROWN* Rayon Yarns and Staple Fibers

Sales Offices: 350 Fifth Avenue, N. Y. C. 1;
Providence, R. I.; Charlotte, N. C.;
Philadelphia, Pa.

Plants at: Marcus Hook, Pa.; Roanoke, Va.; Lewistown, Pa.; Nitro, W. Va.; Parkersburg, W. Va.; Meadville, Pa.; Front Royal, Va.

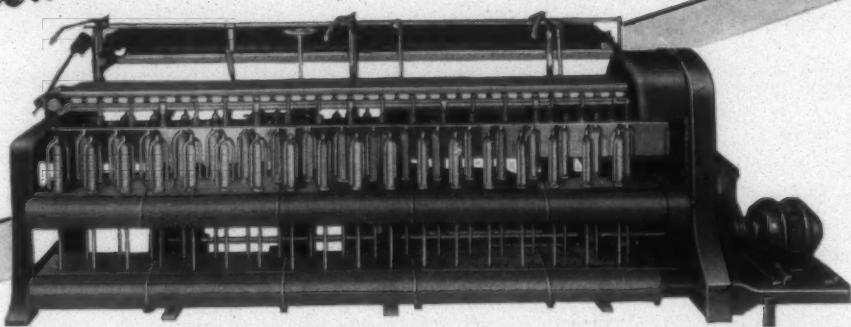
*Reg. U. S. Pat. Off.



POST-WAR QUIZ

*Question: What machine will replace
three conventional-type speed frames?*

Answer: H & B HIGH DRAFT ROVING FRAME



HERE'S WHY:

A specially - designed frame accommodates our High - Draft Roving System, 4 or 5 roll, with patented Scroll Condenser. In one operation, this system can produce 3.00 to 6.00 hank roving from 50 to 60 grain sliver. It is today drafting cotton up to 30 on speeders and up to 16 on intermediates. Using mixtures such as rayon and cotton or rayon and wool, present installations are drafting as high as 48 in one operation.

High drafting of sliver has been greatly simplified by the use of our Bakelite Patented Scroll Condenser. By eliminating static and

condensing fibres, it prevents flaring and spreading, without disturbing parallelization, giving enough false twist to allow better drafting zone control.

Card room investment is much less with the H & B High Draft Roving Frame, and manufacturing costs have been reduced as much as 6/10 of one cent per lb. of yarn.

Mechanical features include: Exceptionally strong differential gear-

ing . . . draft changes quickly made . . . simplified builder, easily adjustable . . . articulated quiet chain bobbin shaft drive . . . superior finish, including polished non-rusting metallic clearer covers . . . single or double sliver lifting rolls . . . angle iron creels.

Make this machine part of your post-war plans NOW and let us know the details, so that we may assist you to work out a balanced program to meet competitive conditions.

• • •
H & B AMERICAN MACHINE CO.
PLANT AT PAWTUCKET, RHODE ISLAND

Boston Office, 161 Devonshire Street; Charlotte Office, 1201-3 Johnston Bldg., Atlanta Office, 815 Citizens & Southern National Bank Bldg.; Export Dept., United States Machinery Co., 90 Broad Street, New York 4, U. S. A.



CONES THAT SATISFY KNITTERS FROM THE MACHINE THAT SIMPLIFIES CONING

More and more knitters consider Roto-Cones standard for cotton knitting yarns. Yarn mills operating Roto-Coners* report enthusiastic reception and requests for more

Roto-Cones. Meanwhile, orders we are receiving from spinners indicate a widespread intention to replace old winding equipment with Roto-Coners*, the modern drum winders which simplify operation and maintenance and offer the opportunity to increase winding production.

Universal Winding Company

PROVIDENCE BOSTON UTICA PHILADELPHIA
CHARLOTTE ATLANTA

Roto-Cone features appreciated by knitters include (1) shallow, crush-resistant nose end; (2) fewer stiches due to quick traverse reversal; (3) accelerated taper for free yarn delivery; (4) steep-angle wind for better delivery; (5) freedom from roll cuts and chafed yarn. They also like the uniformity of Roto-Cones—always produced under standard conditions, with the same Rotary Traverse, with uniform settings.

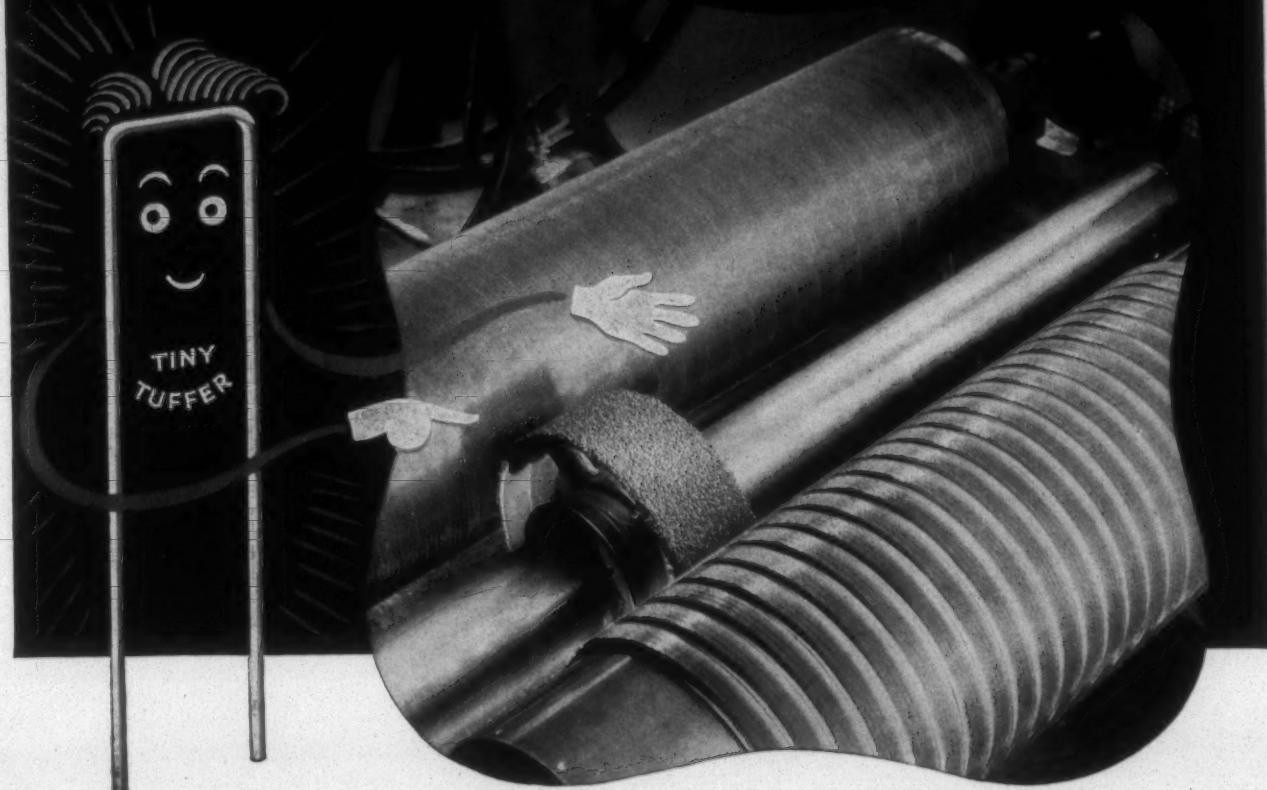
Nothing could be more simple than the Rotary Traverse—which guides the yarn while it drives the package. Made of plastic for cotton yarns, of cast iron for spun rayon and other yarns, it eliminates cams, guides and other parts which limit winding speed, which wear fast, and introduce the chance of inequalities in winding from spindle to spindle.

ROTO-CONER* 
REG. U. S. PAT. OFF.
Open-Wind Cones for Knitting

WARPING CONES · DYEING PACKAGES · PARALLEL TUBES FOR TWISTING

TUFFERIZED Card Clothing

stays on the job with less grinding



If you want to increase production and lower costs in the card room, try Tufferized Card Clothing.

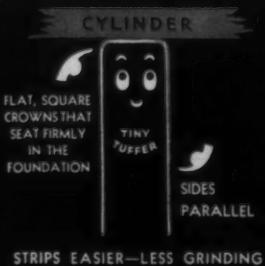
It is made from the finest steel wire . . . especially tempered for toughness and flexibility, yet it takes grinding easily to sharp, clean points.

Because it is so accurately formed and placed in the foundation, Tufferized Card Clothing is easier to strip . . . and there is less danger of injuring or dulling the points. This means fewer grindings, more production and lower carding costs.

Your best bet is to *standardize on TUFFER.*

TUFFER PRODUCTS

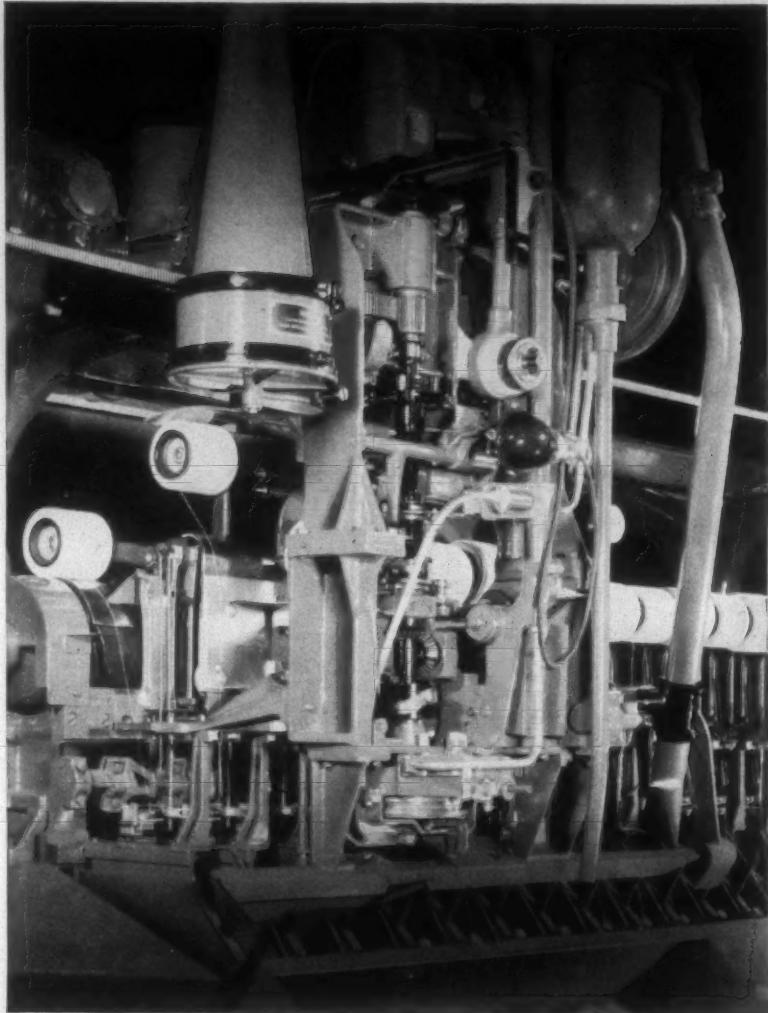
Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets, Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles



HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N. C. Branch Offices: Philadelphia, Dallas. Canadian Agents: Colwool Accessories, Ltd., Toronto 2



“Machines that Keep Running...”

BARBER-COLMAN Automatic Spoolers and Super-Speed Warpers have proved their ability to keep running with very little down time for repairs, and extremely low expense for repair parts. The reason for this is that we paid particular attention, in the design of every part of the machines, to the idea that they must be able to stand up under practically continuous operation. That is why the records show very few cases of breakage due to weakness or poor design, and, over a period of years, an average of less than the expected amount of replacements due to wear. This record of steady service has brought to the owners and operators of Barber-Colman machines an exceptionally good achievement in high and continuous production, which has been especially valuable in these war years when it has been important to eliminate every possible waste of machine-hours and man-hours. Operating and productive efficiency in the production of vital war goods has been kept at a high point in mills using Barber-Colman equipment, with the added advantage of uniform high quality of product obtainable with these machines. We urge you to give full consideration to the durability, long life, high efficiency, and low maintenance and repair costs of Barber-Colman Automatic Spoolers and Super-Speed Warpers when you are considering the purchase of spooling and warping equipment. Our experienced branch office and field representatives are ready to discuss your situation thoroughly with you at any time.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • TWISTER CREELS • MOISTURE CONTENT CONTROLS

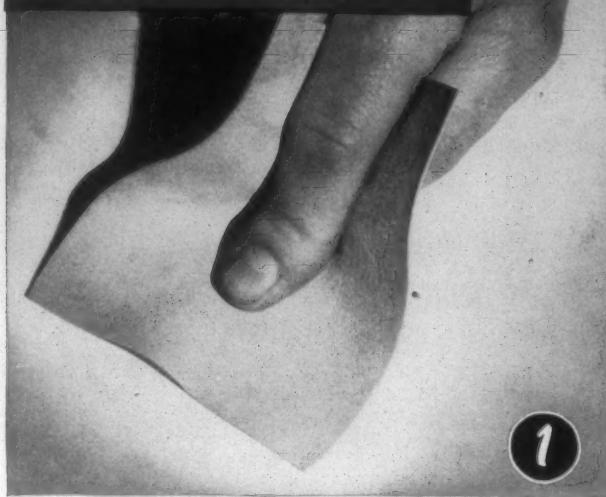
BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS, U. S. A.

FRAMINGHAM, MASS., U. S. A.

GREENVILLE, S. C., U. S. A.

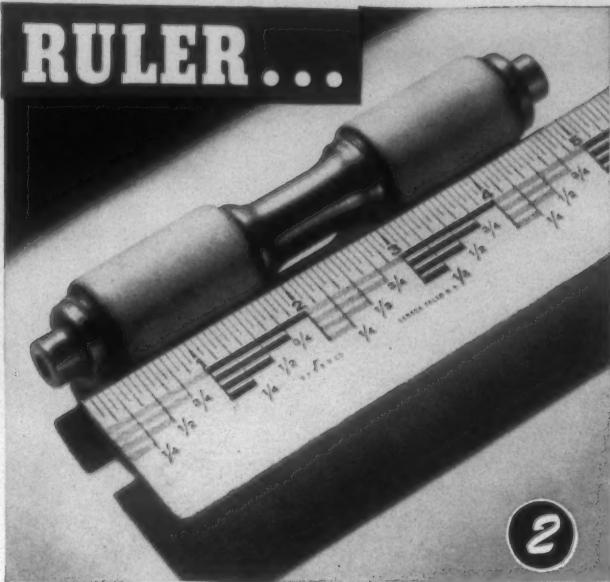
MANCHESTER, ENGLAND

RUBBING...



1

RULER...



2



1

Test No. 1 proves Spinna's high friction value — which means less "eyebrowning". Rub a piece of Spinna Calf against a smooth surface, pressing down slantwise. It will move jerkily, for friction will hold it back. Make the same test with other roll covering materials. You'll see why Spinna's superior friction surface will do a better drafting job . . . and will carry waste well onto the clearer.

2

Test No. 2 gives proof of Spinna's ability to hold its shape — no hollowing-out. Take a Spinna-covered roll off the frame and see if the traversing action of the yarn has caused the leather to spread toward the edges. A Spinna cot will hold its shape longer because the leather springs right back after the sliver has forced it to one side.

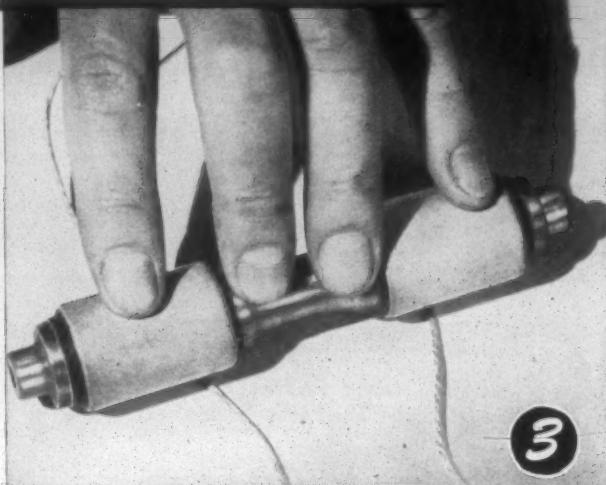
3

Test No. 3 demonstrates Spinna's resiliency — no damage from ordinary hard ends. Lay a length of yarn on a table and roll a Spinna-covered roll over it. Then look quickly at the leather. There will be no trace of a groove. That's because Spinna's triple-resiliency allows it to take an ordinary hard end and then recover its original smooth surface without delay.

For freedom from the troubles that may interfere with spinning frame efficiency and yarn quality . . . and for the longer life that Spinna Calf's strong wearing surface promises . . . tell your roll coverer: "Spinna Calf".

Lively **SPINNA CALF** **ROLL COVERING** *It's Triple Resilient*

ROLLING...



Spinna Calf..

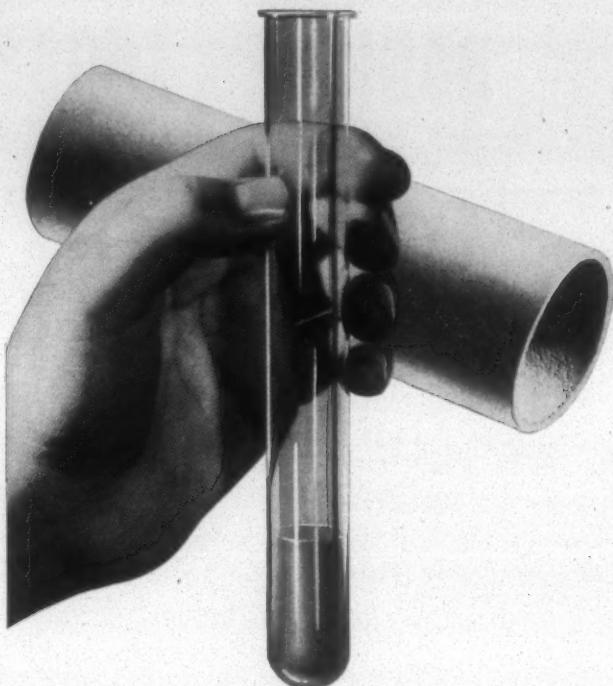
AIR CUSHIONS IN A
NETWORK OF TOUGH,
SPRINGY FIBRES



"If you want roll covering that is adjustable to all counts . . . can take ordinary hard ends without leaving grooves . . . and stays kind to the yarn for up to 18 months and more in front line positions . . . then Spinna Calf — the most generally-used calfskin — is your best choice."



THE APRON MATERIAL WITH THE INGREDIENT THAT REDUCES STATIC TROUBLES



Static electricity is a major cause of spinning troubles, causing the yarn to cling to metal surfaces or wrap around the top front roll . . . making the fibres stick out in all directions, puffing the sliver open after leaving the front rolls.

Using a chrome-tanned leather apron will help reduce such troubles, for the mineral content in the leather is unfavorable to static electricity. The mineral compound used in Lawrence Chrome Aprons has good conductivity. Furthermore, a hygroscopic ingredient which Lawrence introduces, also increases the tendency of the apron to carry off static.

When you use Lawrence Chrome, you take advantage not only of the apron material that is furnished *open-end* . . . but also of many superiorities which have made Lawrence Chrome the choice on more spinning and roving frames than any other type:

Better drafting. The smooth, firm, high-friction surface holds the fibres — even the shortest — in line. Oily and gummy deposits are absorbed by the porous leather, leaving none on the surface to spoil the yarn.

Longer life. Lawrence Chrome's firmly knit fibre structure resists abrasion and refuses to "bell out" with pressure of the traversing yarn.

Apron manufacturers will tell you it gives superior results. Specify Lawrence Chrome for your next aprons.



LAWRENCE **CHROME** LEATHERS

1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY
PEABODY, MASS.

GREENVILLE, S. C.

SIDEBOTHAM'S PATENTED SPINNING TAPE BANISHES THOSE SPINDLE "BUMPS"

"The Secret is in the Lap"



THE CONVENTIONAL TAPE
Has Double Thickness Laps



SIDEBOTHAM'S PATENTED LAP
Permits Same Thickness Throughout

RIGHT IN PRINCIPLE - RIGHT IN SERVICE

SIDEBOTHAM'S TAPE IS ALWAYS IN CONTACT WITH THE WHORL

insuring

- Longer life, as proved by independent mill tests
- More even spindle speed
- More even yarn twist
- Less wear on bolster
- Less power consumption.

More Than 200 Mills Are Enthusiastic Users of Sidebotham's Spinning Tape

TRY A ROLL IN YOUR OWN MILL

Simply select a tape of correct length from one of your frames; cut it at any point except at Lap; roll it up and mail it to us with your trial order. Then

COMPARE THE ACTUAL PERFORMANCE

MADE IN THREE WEIGHTS AND ALL WIDTHS

No. 2658—Regular 40-42 yards per lb.

No. 3750—Medium 54-56 " "

No. 3572—Thin 62-63 " "

(based on $\frac{5}{8}$ " widths)

Comes in rolls of continuous and uniform lengths. All laps 3".

WOVEN TO YOUR LENGTH SPECIFICATION

Manufactured by John Sidebotham, Inc., Frankford, Philadelphia, Pa.

Sold Exclusively By

TEXTILE SPECIALTY COMPANY

P. O. BOX 1297

GREENSBORO, N. C.

Representatives

GEORGIA AND ALABAMA

J. H. Slaughter, 311 Aberdeen Drive, Greenville, S. C.

NEW ENGLAND AND CANADA

Matthews Equipment Co., 93-A Broadway, Providence 3, R. I.

A STAND OUT
FOR MORE
THAN 30 YEARS

STALEY'S TEXTILE STARCHES



• Today Staley cooperation and service are more important than ever. They mean *plus* value of Staley's complete line of unmodified and modified corn starches. Naturally, strict chemical control is important in the production of Staley's starches. *It* is assurance of uniform quality and dependable performance from car after car.

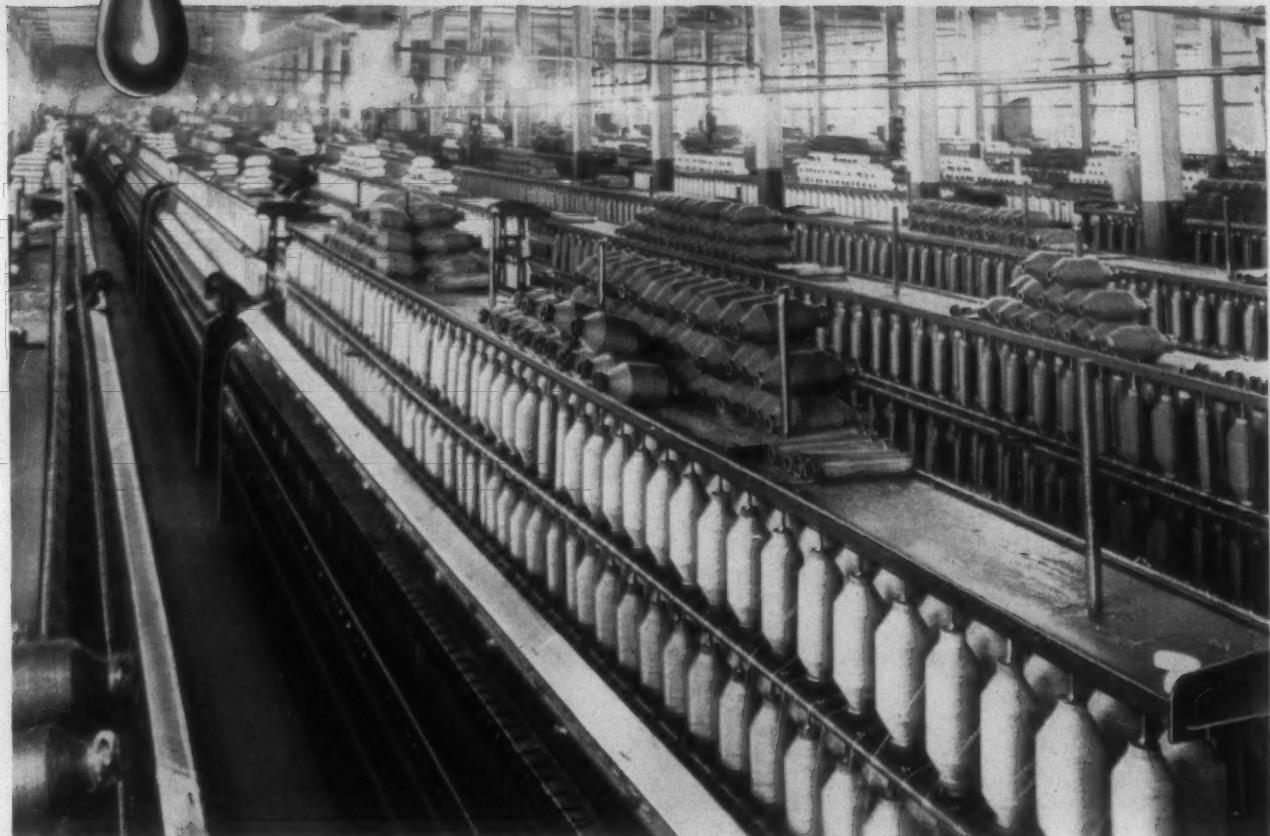
Naturally, too, Staley's capacity to produce and ability to deliver are vital factors today. But it is Staley cooperation and service that prompt so many mill owners, managers and superintendents to say they *like* to do business with Staley's.



A. E. STALEY MANUFACTURING COMPANY
DECATUR ILLINOIS

CORRECT Lubrication means

Better Maintenance



PROBLEM—excessive wear, difficult maintenance.

SOLUTION—*Correct* lubrication.

Sinclair provides LILY WHITE OILS for *correct* lubrication of spindles. These oils have a range of viscosities to suit all loads and speeds . . . hold down temperature and power loss. NO-DRIP LUBRI-

CANTS have adhesive properties that make them throw-resistant and highly efficient on looms, cams, top rolls and comb boxes.

Is maintenance a worry? Let us tell you how Sinclair lubricants make for *better maintenance*.

(Write for "The Service Factor"—published periodically and devoted to the solution of lubricating problems.)

SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N.Y.



Facts About the Cotton Textile Situation

THE function and scope of the cotton textile industry, in brief, is to take the raw cotton fiber, which is grown in 17 Southern states and transform it into yarn and cloth. It embraces more than 1,000 mills scattered all the way from Maine to Texas. Spinning mills turn the white cotton fiber from the fields into long strands known as yarn. Weaving mills convert yarn into cloth.

Not all yarn is woven into cloth. Millions of pounds are sold to other industries—to knitters, for instance, who transform it into underwear or hosiery, to thread, twine and mop manufacturers, and to the wire trades. More than one hundred million pounds of cotton yarn are used each year in wire and cable insulation alone!

Ten major fabric groups, most of which include several sub-divisions, make up the weaving section of the industry. They are: print cloth yarn fabrics; fine carded and combed goods; narrow sheetings and allied fabrics; wide fabrics; napped fabrics; tire fabrics; towels; duck; and specialties.

Now these cloths as they leave the mills are not in large measure ready for manufacture into garments or for sale over retail counters to the consumer. The fabrics as they leave the mill are grayish in color, harsh to the feel, and contain certain elements which must be removed if an attractive consumer product is desired. They are sold to converters who in turn have the cloths dyed, bleached or printed or given various finishes that are applied to the so-called basic weave. For example, print cloths are converted into a variety of products by finishing plants, the chief ones being percale, muslin, chintz, cretonne, cambric, crinoline, nainsook, window shades, book cloth bindings and bandages, oil cloth, imitation leather, wall coverings and casket linings.

Converters sell finished cloths to many trades—to manufacturers of dresses, pajamas, shirts, blouses, children's wear, curtains, drapes, sportswear, handkerchiefs, pillow cases, slip covers, hospital clothing, and to many industries—shoes, furniture,

rubber, etc. Only a few cotton mills turn out products that can be moved directly to the consumer. Chief among these are the plants that make towels, bed linens and woven bed-spreads.

The cotton textile industry, it is clear, is a producer of essential materials for other industries. In peacetime its products cover an enormous range—from meshlike cheese cloth to heavy, durable duck which is as strong as steel. These cloths come in many grades of quality (construction) and each is designed for a specific end use and price bracket.

Thus, an overall manufacturer may choose one of ten weights of denim, a work glove manufacturer one of ten grades of canton flannel, a dress manufacturer one of dozens of print cloth.

The cotton textile industry does not make dresses, overalls, gloves, shirts, underwear, hosiery, pajamas, aprons, or any other garments. These are made by other industries—the so-called needle trades and the knit goods industries. As a manufacturer of primary raw material, therefore, it has no responsibility for or control over the ultimate use made of its yarns or fabrics. The type or weight of fabric used in the making of a pair of overalls, a dress, or a shirt depends upon the choice of the overall manufacturers, the manufacturer and the shirt manufacturer. The design or styling of the garment; the length of a dress skirt or shirt tail; the size of the seam; the quality of the sewing; all these factors which determine the appearance, durability and cost of the finished garment rest not with the cotton textile industries but with the industries that produce garments.

There is no denying that at present the cotton textile industry does not stand too well in the public eye. American consumers are asking why cotton goods are scarce, why shortages are most pronounced in articles of essential use, why civilian cottons are lower in quality, why low-priced garments are lacking when there appears to be an adequate supply of higher-priced apparel, whether cotton mills are refusing to produce low-priced goods and whether the industry has shifted from essential goods to luxury items. Answers to all of these questions may be found in one of the best examples of institutional publicity put out so far during the war—a booklet entitled "What Is the Truth About the Cotton Textile Situation," published and distributed by the Cotton-Textile Institute, Inc. The information it contains, reprinted on this and following pages, should be read by every Southern textile executive and brought to the attention of other interested persons as well.

Cotton is versatile. It has thousands of uses—for apparel, for house furnishings, and in industry. During peacetime about 40 per cent of the industry's production goes into clothing, about 20 per cent into household uses, and 40 per cent into industrial uses. In the four-year period 1936-1939, average annual produc-

tion amounted to eight and one-half billion yards. No other textile material is as widely used.

The demand of the military services for cotton products is tremendous. The Army alone requires 11,000 separate cotton products. They range from shoe laces to the tires of Flying Fortresses, from white fabric for arctic wear to insect nets for the tropics, from fuel hoses and self-sealing gas tanks to sterilized surgical dressing for the wounded.

Every consumer with a member of the family in the armed services is familiar with such personal equipment as "sun tan" uniforms, field jackets, barrack or sea bags, socks and so on which are part of the general issue to everyone in the fighting forces. These items above, of course, run into the millions of yards.

In addition to these military uses, the war has expanded the demand in other ways. More cotton bags than ever before are needed to package foodstuffs. In peacetime part of this business went to burlap imported from India. With shipping restricted, the industry in 1942 and early 1943 was called upon to supply more than a billion and a half yards of cotton fabrics for this purpose alone.

Wartime demands for cotton textiles are not limited to military requirements only. All civilian demands have increased. With industry employing ten million more workers, sales of work clothing expanded to record-breaking proportions. Industrial cotton fabrics—filters, machinery and fan belts, timing gears, tire cords, wire and cable insulations, all kinds of tapes, heavy filter cloths employed extensively in the petroleum, paint, chemical and food industries, etc., are selling in the largest amounts ever recorded. The sharp rise in the birth rate has complicated the task of the industry by doubling the call for diapers, bed sheets, pants and the many cotton items required in layettes.

Lend-Lease, Relief Demands Heavy

In addition, to quote Donald Nelson, head of the War Production Board, "our allies urgently need large amounts of cottons in order to carry on the fight. Only a few countries are producing even a part of their requirements. The British have had to reduce their textile output in order to make way for other supplies. We have become weavers for the world, and we must meet a heavy war export demand. In 1943, 500 million yards were exported for essential war use. This year an increase of 900 million yards is needed. The textiles sent abroad not only help to fill the minimum needs of our allied fighting forces and hard-pressed civilians but they also ease the strain on the impoverished peoples in the liberated areas whose support of our troops is a valuable military asset."

In the cotton industry there has been no expansion in productive capacity resulting from establishment of government financed facilities. Even since long before Pearl Harbor, the industry has been going ahead on its own steam. To complicate matters still further, mills were not allowed to invest money in new facilities. With iron and steel scarce and machinery manufacturers forced to turn out ordnance, it has been most difficult for the industry to replace worn out equipment and obtain parts. In 1944 there were actually 2,681,000 less spindles than in 1939 due to the junking of worn out machinery.

With no equipment available, the industry was forced to get the maximum production out of what machinery it had

on hand and did so by hiring thousands of additional workers and operating multiple shifts. In 1939 there were 394,000 workers in the mills. By 1942 the wage rolls had risen to 503,000. In 1939 the average spindle operated 4,149 hours over the entire year. In 1942 the average spindle was working 5,794 hours, an increase of 40 per cent.

This hiring of workers and intensive utilization of equipment combined to expand production to levels previously regarded as unattainable by government officials, economists and even management and labor. In 1939 the industry processed seven and one-third million bales of cotton and turned out more than nine billion square yards of cloth. In 1942 mills processed almost 11 and one-half million bales of cotton (5,750,000,000 pounds) and produced about 12 and one-half billion square yards of cloth.

Afflicted with war-born forces beyond its control, the industry has been unable to hold production at the peak levels reached in 1942. The draft has taken more than 100,000 of its workers. Thousands of its most skilled workers have been lost to the war emergency industries—shipyards, aircraft factories, munitions plants and the like. As one of the largest employers of labor among manufacturing industries, cotton textile mills constituted a reservoir from which war industries managed to siphon off large numbers of highly desirable operatives. As a consequence of these developments, employment fell from 503,000 in 1942 to 455,000 in March, 1944. These experienced workers were replaced by men and women who had to be given expensive training, but even so production per man-hour has gone into a noticeable decline. Table I gives the official statistics concerning production, manpower and facilities since 1939.

TABLE I

Year	Spindles in Place	Spindles Hours Run	Hours Run Per Average Spindle
1939	25.9 Million	92.5 Billion	4,149
1940	24.9 "	98.1 "	4,381
1941	24.5 "	121.7 "	5,307
1942	24.1 "	133.4 "	5,794
1943	23.8 "	125.4 "	5,514
1944	23.3 "		

Year	Number of Workers	Bales of Cotton Processed	Square Yards Produced
1939	394,000	7.3 Million	9.0 Billion
1940	409,000	8.0 "	9.5 "
1941	474,000	10.5 "	11.3 "
1942	503,000	11.4 "	12.4 "
1943	486,000	10.7 "	11.7 "
1941	474,000	10.5 "	11.3 "
1942	503,000	11.4 "	12.4 "
1943	486,000	10.7 "	11.7 "

Since cotton is second only to steel as the most vital war material, the industry was among the first on which wartime controls have been imposed by the War Production Board. Through directives, priorities and allocations, cotton textile mills are told what to make and to which industries their output may be sold.

These controls assure an adequate and continuous supply of yarns and fabrics to the military and essential war industries. As their needs are large and urgent and total produc-



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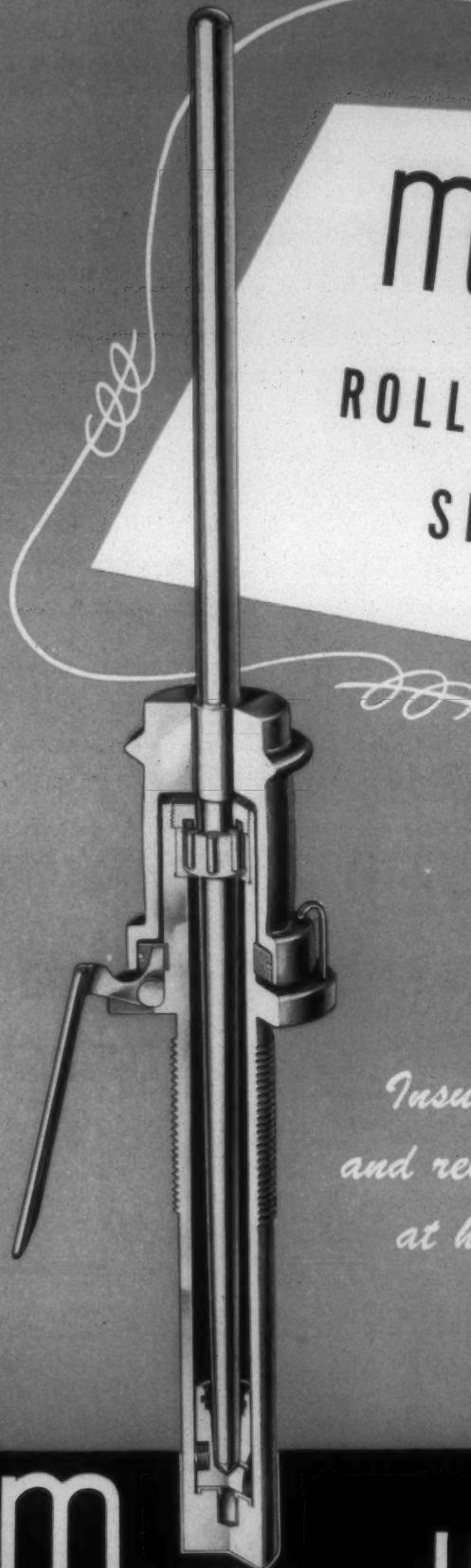
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tion, though greater than ever in peacetime history, has been inadequate for both war and expanded civilian demands, the amount available for civilian use has been sharply reduced. In many instances, the sale of certain fabrics to civilians has been completely prohibited.

The heavy requirements for bagging fabrics is a severe strain on the industry. In peacetime the cotton textile industry produces about 650 million yards of fabric for bagging. In 1943 it produced about one and one-half billion yards. To supply this amount of fabric, print cloth and sheeting were diverted by government order from civilian markets to the bag trade. The sale of 80 square print cloths, a popular fabric for house dresses and shirts, for civilian use, was completely prohibited. The diversion of print cloth meant less yardage for dresses, and the diversion of sheeting resulted in less fabric for hospital uniforms, aprons, draperies, pocketings, etc.

The demand for bagging was so urgent that even denim and towel manufacturers were ordered to shift part of their equipment from the production of their customary fabrics to bagging materials. These shifts cut down output of towels and denim.

The tremendous demand for tire cord fabrics, binder twine (usually made of jute) and camouflage netting means that less cotton yarn is available for sale to the knit goods industry for underwear and hosiery.

The large needs of the armed services for bed sheets and pillow cases and later for raincoat fabrics, which are made on the same machines, resulted in fewer bed linens for civilians.

Mills making clip-spot marquises, a popular fabric for curtains, have been directed to shift production to insect netting, needed for prevention of malaria in the jungles of the Southwest Pacific.

70 Per Cent Directives

It is impossible to give in detail the full extent of WPB control and its effects upon the amount and nature of the civilian supply. This, however, can be said: *More than 70 per cent of the cotton textile industry's productive capacity is now operating under WPB directives.*

This swift diversion of important yarns and fabrics to the armed services and essential war industries has forced garment industries producing civilian markets to seek substitute cotton fabrics. Although these fabrics are standard fabrics, they are often put to uses for which they were not originally intended, the result being that there has been some unintentional deterioration in the quality of certain types of garments.

That the shortages of certain cotton textiles is due to a greatly enlarged demand and not to the failure of the cotton textile industry to produce them can be best understood by the wartime case history of such fabrics.

Denim is an indigo fabric very important in the manufacture of overalls. Because of its excellent wearing quality and low price, it has become one of the most popular work fabrics. The great increase in the number of workers in the United States created a great demand for denim. In addition to this heavy demand, denim is used for dungarees for the Navy. Early in the war effort, WPB prohibited the shifting of denim looms to any other fabric, except that in 1942, 20 per cent of them were diverted, under order, to the production of bagging. There are now 13,000 looms

devoted to denim, which is higher than the average number of looms engaged in such manufacture in pre-war years.

The production of denim, as reported to the Cotton-Textile Institute, is shown in Table II.

TABLE II		Yards
DENIM PRODUCTION		
Year		Yards
1938	.....	219 Million
1939	.....	230 "
1940	.....	234 "
1941	.....	325 "
1942*	.....	296 "
1943	.....	266 "
1944 (3 months)	.....	74.5 "

(*20 per cent of denim looms diverted, by order of WPB to bagging material.)

According to Table II, it is clear that the production of denim is above peacetime levels and that the recurrent shortages in civilian markets are due to the diversion of so much production to the fighting forces and abnormal civilian buying.

Illustrative of the enormous diversion of certain fabrics is a recent announcement by the Navy Department to the effect that before the year it will need 23,000,000 pairs of dungarees in addition to the amounts already on order. In 1943, for the sake of comparison, 9,000,000 pairs were delivered to the Navy.

Denim mills have pushed up production without debasing long established quality standards. The OPA recently commended denim mills for their stubborn adherence to traditional methods of doing business.

Another important popular work clothes fabric is 3.90 yard chambray. The cloth is so necessary for Navy dress that during the last two years about 65 per cent of the production has gone into shirts for Navy use alone.

Production statistics for 3.90 yard chambray are shown by months in Table III. They represent about 90 per cent of total production. Statistics for earlier years have never been compiled.

Month	TABLE III		
	PRODUCTION OF 3.90 YARD CHAMBRAY (Linear Yards)		
	1942	1943	1944
January	.....	4,800,000	4,800,000
February	.....	5,600,000	5,100,000
March	.....	6,800,000	6,400,000
April	5,000,000	5,600,000	.....
May	4,200,000	5,300,000	.....
June	4,600,000	6,200,000	.....
July	5,400,000	4,500,000	.....
August	4,700,000	4,500,000	.....
September	5,100,000	5,800,000	.....
October	6,400,000	4,000,000	.....
November	5,400,000	3,900,000	.....
December	4,900,000	5,400,000	.....
Monthly average	5,077,000	5,033,000	5,400,000

These figures prove there has been no decline in production. In March, 1944, the latest month for which statistics are available, production was—(Continued on Page 50)

Desizing Agents Useful for Processing Blended Yarns

By L. C. TRAYNER — PART ONE

DESIZING agents may be classed under three headings, i.e., acids, enzymes and compounds holding chlorine in a suitable chemical condition for satisfactory solubilizing of starches and vegetable gums. The standard procedure for handling desizing agents on cotton piece goods in finishing plants is to singe the goods, then add to the dampening box the amount of acid or desizing enzyme necessary to start the solubilization of the sizing starch and gums on the warp yarns. These desizing agents may be padded onto the singed goods after they have been dampened and batched before being packed into kier for kier boiling or handled on some type of peroxide bleaching process. After the cotton goods have been treated with the desizing agents they are allowed to steep in this dampened condition for several hours to permit the vegetable gums and starches to solubilize through hydrolysis into some soluble form such as dextrose or glucose, whereby the goods may be hot washed to remove these decomposition products from the sizing.

On removal of sizing gums and starches the cloth is given subsequent kier boil, peroxide bleach or chemicing, according to plant layout. In recent years there have been many changes from the old standard cotton goods preparation procedures, and the chief one of interest to most finishing plants is the so-called peroxide continuous bleaching process now being introduced throughout cotton finishing plants in the South and East. As these articles will be limited to discussion of various practical application of desizing agents, the reader is referred to the excellent articles on bleaching now appearing in this and other textile journals.

The increasing yardage of synthetic yarn blends and cotton and synthetic yarn blended fabrics has placed quite a burden on original thinking and practical development work in both plants formerly devoted entirely to cotton finishing as well as specialized dyeing plants handling only synthetics during the past few years.

Cotton-Synthetic Blends

Due to the inclusion of the acetate rayon, casein fiber (aralac) and wool yarns in the various cotton-synthetic yarn and synthetic yarn blended fabrics, dyers and finishers have been forced to adopt different operating procedures for desizing these goods as compared to the older accepted cotton finishing methods briefly described at the beginning of this article. The dyeing and finishing of these synthetic yarn blended fabrics was first undertaken chiefly by the synthetic (rayon) dyers in small plants where their processing operations followed closely the older silk goods finishing plants. As these plants were limited as to preparation equipment and the yardage of goods to be processed was small compared to the standard cotton finishing plants, there has been a continual change in preparation and dyeing

procedures on this type of fabrics over the past few years. In many cases, these preparations and dyeing procedures have broken away from the older standard cotton processing principles, as illustrated by the brief outlined operating procedures now in use or under practical development at many of the most progressive finishing plants now handling these blended fabrics.

The first procedure is carried out as follows:

- (a) Singeing of greige goods
- (b) Desizing by operating method suited to plant layout
 1. Padding with enzyme, batching and boil off
 2. Desizing on jig or dyebeck with desizing agent—most economical for fabric under process
 3. Desizing by combined enzyme and acid treatment
 4. Desizing with special compounds
- (c) Dyeing operations
- (d) Finishing operations

Operations for the second method are in the following order:

- (a) Dye in the greige
- (b) Desizing of the dyed goods on plant layout available and by method suitable for type of dyestuff used in dyeing greige fabric
- (c) Singeing fabric when desirable
- (d) Finishing operations

Synthetic blends best handled by first procedure are: (1) Twill weaves constructed of 20 per cent cotton, 60 per cent spun rayon (viscose) and 20 per cent spun acetate rayon; (2) Synthetic linen weaves constructed with 60 per cent spun viscose rayon and 40 per cent cotton or practically 100 per cent spun viscose rayon.

Synthetic blends that may be handled by the second method are: (1) Twill weaves constructed of 80 per cent spun viscose rayon and 20 per cent spun acetate as well as those constructed practically entirely of spun viscose rayon; (2). Novelty weaves constructed of 60 per cent filament acetate rayon and 40 per cent filament viscose rayon. These fabrics, dyed in the greige, usually have low twists on their filament yarns, thus enabling the dyer to obtain sufficient penetration and levelness for fast production work.

As listed for cotton desizing operation, the desizing agents in use are: acids, enzymes and compounds holding chlorine in suitable chemical combination whereby it may solubilize starches and vegetable gums used in sized synthetic warp yarns. Taking up each one of these desizing agents in order of importance, the enzymes due to their ease of application and lowered costs will be discussed first.

Enzymes were first discovered by de Latour and Von Schwann in 1836, through their discovery that yeast plant caused fermentation and produced alcohol from sweet fruit juices. These chemists considered this fermentation a *life process*, while Liebig held that it was a *mechanical chemical*

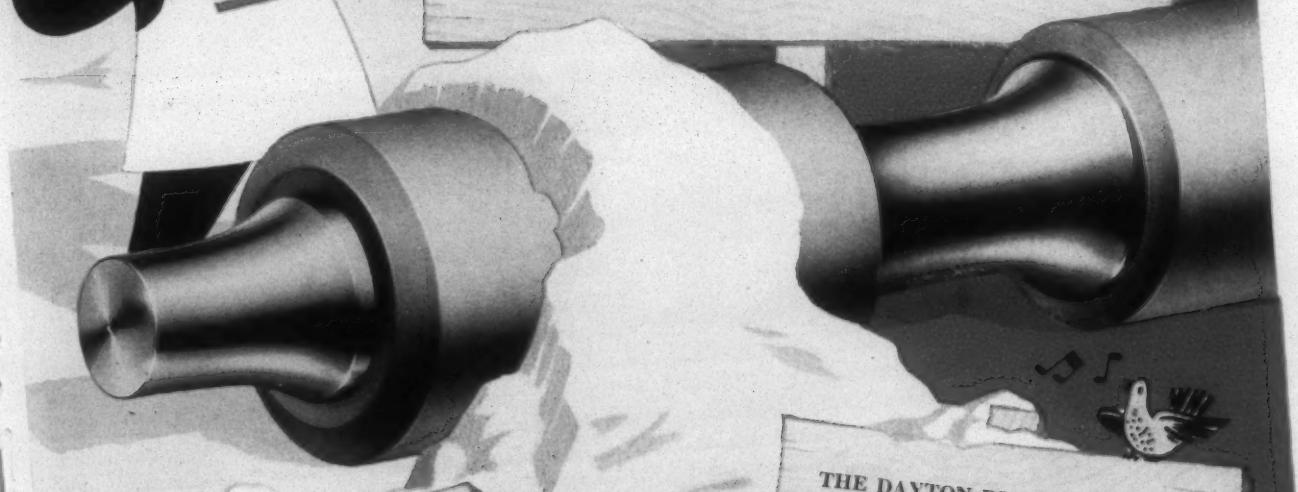
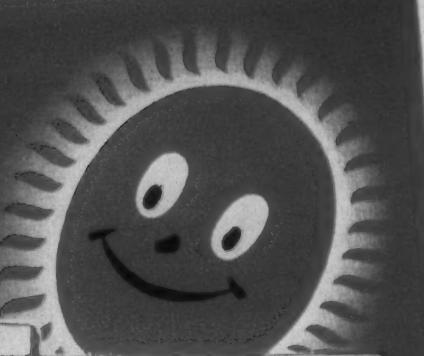
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action, which is now more clearly defined as catalytic action. Pasteur subscribed to the vital or life process theory of de Latour and Von Schwann, but later work of Buchner in 1897 proved that the living cell would be destroyed but that an enzymatic agent called zymase possessed the actual fermenting power on sugars. Studies by Buchner confirmed some of the earlier beliefs of Pasteur and Liebig, in which he showed that zymase is a chemical compound possessing definite fermenting properties that is catalytic in its action in that the enzyme's presence starts the fermentation through proper control but does not react chemically with the compound being acted upon.

Diatase and Maltase

Chemists later discovered diatase and maltase, two enzymes that act upon starch and other vegetable cellulosic gums which are used in the sizing of synthetic and cotton yarns. The first industrial application of diatase and maltase was for the production of industrial alcohol by the diatase converting starch into a sugar known as maltose (dextrine type) which is then converted by maltase into glucose and this glucose is acted upon by zymose to form alcohol. These same chemical principles of catalytic hydrolysis are carried out in the desizing of goods sized with vegetable starches and gums. The malt diatase enzymes were the first type of enzymes introduced to the textile wet processing and finishing trade for the hydrolyzing and solubilizing of the vegetable starch and gum on sized warps. These enzymes are practically all of the amylolytic type and act upon vegetable starches and gums only. The usual recommended processing temperature for the malt diatase enzymes range from 130 to 160° F. and a practical working pH of 4.01 to 7.01 in the padding or desizing cloth. Due to varying pH of local water supplies, the plant chemists can make necessary adjustment for water supply.

A second type that has found ready acceptance for desizing work is known as the bacterial enzyme. The practical working temperatures and pH conditions for this type range from 145 to 175° F. at a pH of 6.5 to 8.0. Bacterial enzymes act both upon vegetable and protein products in sized

warps and therefore may be classed as possessing amylolytic and proteolytic desizing action. Another type of interest and value for desizing is derived from animal origin. This class is known as animal enzymes and is obtained from the digestive juices of the pancreas. The large meat packers have made quite a study of recovering and activating these pancreatic digestive compounds and they prove very valuable for use in desizing mixtures containing compounds such as glue, casein and other protein products as well as vegetable sizes. The animal enzymes are best applied for good working conditions at a pH of 6.0 to 8.0 and a pH of 110 to 140° F. These enzymes possess both amylolytic and proteolytic action on vegetable and protein sizing compounds. There are other types but the three listed comprise the most widely used types, as the others require a narrow temperature and pH value to obtain full money value from when used on a practical textile plant scale.

Enzymatic action on protein sizing compounds is catalytic and hydrolytic in its action and quite similar in the chemical changes wrought on the proteins as the action of the amylolytic enzymes on vegetable starches and gums.

The Use of Trypsin

Trypsin is the chief proteolytic enzyme found in the recovered and prepared animal pancreatic juices and it hydrolyzes proteins chiefly into amino acids which tend to make the desizing bath slightly acetic, so for that reason many of the plant chemists prefer to start this desizing bath at 8.0 pH. Bacterial enzymes hydrolyze proteins into peptides, peptides and partly into amino acids, but as this enzyme works nicely on a practical neutrality around 7.0 to 8.0, then such a range should be used, as these sizing decomposition products should not affect the pH of bath noticeably. Protein compounds properly treated with sufficient proteolytic enzymes should be hydrolyzed and solubilized sufficiently for the decomposed sizing compounds to be removed by scouring baths of 140 to 180° F. with only mild synthetic detergents or alkalies and should not require strong alkalies or soap and kier boiling.—(To be continued.)

Information on Sizing Exchanged at A.A.T.C.C. Meeting

SYNTHETIC sizing compounds were discussed very thoroughly during the seminar conducted by Prof. A. H. Grimshaw of the North Carolina State College textile school at the recent meeting of the American Association of Textile Chemists & Colorists' Piedmont section at Winston-Salem.

It was generally agreed that alkali cellulose ether will have to be developed considerably in regard to setting up equipment for the various steps before mills running rayons and cottons would adopt it. General opinion was that the permanence of this synthetic will be of real value, as it may eliminate several wet processing operations. Synthetic compounds of the water soluble type, such as the polyvinyl alcohols, were reported to possess qualities which result in low shedding, with finished goods having a

desirable feel. Methyl cellulose is a synthetic product possessing possibilities for use in combination with other agents, and many present reported it reduces shedding and increases breaking strength on the sized yarn.

A discussion took place on the drying of sized yarns by infra-red ray, gas fired heaters and high-frequency drying by electric contact between points with yarn interspersed. It was generally agreed that gas fired heaters possess the best possibilities of the three methods.

The major factors used in evaluating sizing products for cotton and rayons were determined to be: (1) relation between getting out agents and the degree of penetration of size into yarn; (2) time study of proper cooking of size to obtain the most desirable penetration and lowest degree of

shedding; and (3) whether to use inorganic hygroscopic agents. A general desire for more information about synthetic softeners was expressed.

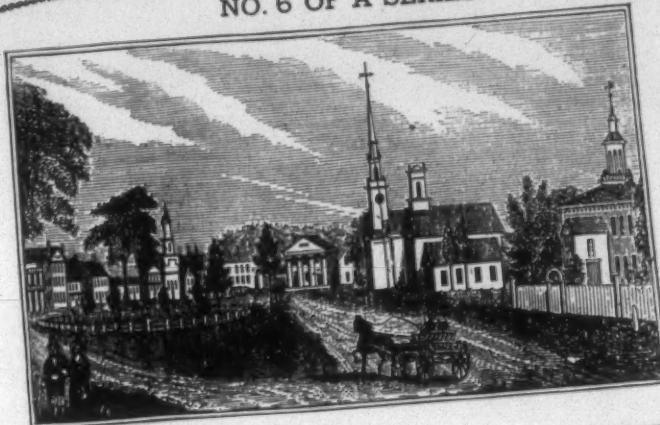
The subject of sizing compounds to be used on nylon yarns was not discussed freely by those present. It was determined, however, that proper application depends greatly on the proper pressure of squeeze rolls regardless of whether low or high twist yarns are being run. Polyvinyl acetate and gelatin form the basis of most nylon sizing compounds at present, with some experimental work being carried out on water soluble types.

Professor Grimshaw stated that reports will be published in the near future on the sizing study conducted at the Raleigh school, now being reviewed by the Textile Foundation.

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On a visit to America in search of dyestuffs in 1770, he made his most valuable discovery — Quercitron, the powdered bark of the black oak. It was not only employed as a color itself but as a base for other colors. In 1785 the British Parliament granted him a 7-year patent for its exclusive sale but in 1799 he was refused a renewal. Quercitron became available

for everybody but immediately rose in price.

Bancroft's investigations over a long period led to the first book on dyestuffs written by an American — his famous "Experimental Researches Concerning the Philosophy of Permanent Colors" which was recognized as an authority by the great chemists of the time.

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Newly-Developed Cotton Textile Products Announced by Dan River

THE application of synthetic resins and bonding agents to textiles in various stages of processing, whereby the utility and value of the finished product is greatly increased, is today engaging the textile laboratories of the country in extensive and continuous research.

There is a steady stream of new resins for textiles, as well as other uses, flowing from the chemical manufacturers, which are being supplied in an endless variety of formulations, depending upon the specific use for which they are required.

In the processing of cotton, such research or experimentation as was conducted up to a few years ago, was mainly on the physical side and dealt principally with manipulation of the fibers. The emergence of synthetic fibers and resins and the rapid growth of their utilization made research imperative to bring chemistry and cotton together if it was to meet and excel this new competition.

Synthetic resins, if they could be successfully applied to cotton, would open a new field of unlimited potentialities. Early research efforts along this line were not particularly

successful. Finally a master process for treating fabrics with synthetic resins was evolved by Dr. Floyd E. Bartell of Ann Arbor, Mich., and, following upon the Bartell process, Dr. Harley Y. Jennings worked out various applications and improvements. These processes clearly indicate in their results, which are now on a commercial production basis, that a new vista of great extent has been opened to the cotton manufacturer.

Specific research in further development of the basic Bartell and Jennings process is being carried on in the laboratories and pilot plants of Riverside & Dan River Cotton Mills, Inc., at Danville, Va., under the supervision of H. M. Chase, director of the Dan River research division. Dr. Jennings is assistant director of this division. Dr. Bartell is the consultant in research. The Dan River organization is highly diversified in the processing of natural and synthetic fibers into finished products. That makes it necessary, for the aggressive conduct of the business, to maintain a large chemical and research division, which has been materially strengthened in personnel and equipment during the last few years.

The patents issued on various processes and owned by Riverside & Dan River Cotton Mills, Inc., are briefly described in the paragraphs below.

U. S. Patent 2,097,012, issued to Floyd E. Bartell, covers the art of treating fabrics with resins, both synthetic and natural, in such a manner as not appreciably to change the appearance of the treated fabric, but to impart to it improved qualities such as greater abrasive resistance, increased tensile strength and other valuable properties. Particularly, this finish is of a permanent character. It is insoluble in water and resistant to acids. The original color of the treated fabric material is not affected nor changed in any way. Several active licensees are now operating under this patent. The shoe lining industry was the first to be licensed under this patent and is marketing the fabric under the Dan River trademark, "Fiber-Bonded."

U. S. Patent 2,334,199, issued to Harley Y. Jennings, covers the art of applying pigments and bonding material simultaneously to yarn and fabrics. This covers the products as well as the application, and is the result of many years of research and development on the part of Dr. Jennings. The process, which antedates all other pigment dyeing and development, is taking a leading position in the rapidly growing art of simultaneous application of coloring matter and bonding materials to textiles. The coloring matter is so fixed or set on the fabric that the finish is permanent to washing and dry cleaning. Added wear is imparted to the fabric by offering an additional surface against abrasion. The treated fabric may be subjected to repeated washings without affecting the "hand" or appearance. The coloring matter, bound to the fabric by—(Continued on Page 46)

Crease-Resistant Fabrics More Popular

Crease-resistant fabrics, which represent the result of planning during World War I, have zoomed to popularity in World War II. In 1918 ingenious chemists of Tootal, Broadhurst Lee Co., Ltd., famous textile house of Manchester, England, sought means of giving cottons and rayons and other vegetable fibers the resilience natural to animal fibers like wool. Fourteen years of research produced the fabrics now chosen by the British Government and the United States Army for their practical crease resistance.

Production of Tebilized fabrics with tested crease resistance, including rayons, cottons and aralac fabrics, made from milk, has increased 77 per cent in the United States in the past year, according to Frederick Atherton, vice-president of T. B. Lee Co., American representative of the firm. The first linen woven from American-grown flax, which was introduced this summer, was also crease-resistant, while Tebilized velvets with crush resistance are also available.

Scientists, while developing the process by which fabric fibers are impregnated with resin to impart crease recovery, discovered additional advantages. They discovered that resin also adds strength, increases resistance to stretching and sagging and reduces shrinkage. As most fabrics soil on creases, Tebilized garments, in avoiding creases, soil less easily and require less washing or dry cleaning.

HOW TO SOLVE *Lubrication Problems*

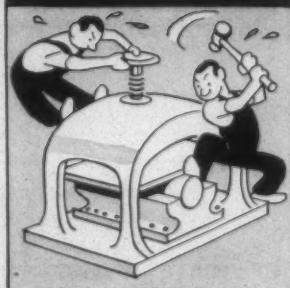
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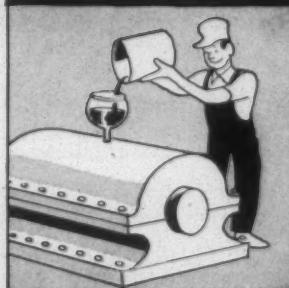
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The reason: Gargoyle Grease Sovarex combines the advantages of both lime and soda-base greases. It is resistant to both water and heat and stands up under boiling water. It also resists dilute alkali and acid solutions. It sticks on the job when other greases fail.

See your Socony-Vacuum representative for details on Gargoyle Grease Sovarex.

SOCONY-VACUUM OIL CO., INC. • Standard Oil of N.Y. Div. • White Star Div. • Lubrite Div. • Chicago Div. • White Eagle Div. • Wadham's Div. • Magnolia Petroleum Co. • General Petroleum Corp. of California.

WHERE PLANTS
BENEFIT BY USING
ONE GREASE!



The Importance of a Guide Comb or Reed In Warp Preparation

By FRANK KAUFMANN, Steel Heddle Manufacturing Company

A N old timer once remarked that he did his slashing on his warper and his weaving on his slasher. There is a lot of truth in this statement, for the success of the finest loom or slasher depends to a large extent upon the quality of the beams delivered to those machines. Make sure you have perfect warps and your weaving problems will be a lot easier.

Modern warp preparation machines are expensive, and to get the full returns from them they should be equipped with a guiding comb or reed best suited for the work to be run on them. The quality and uniformity of a beam largely depends upon the accuracy of the comb which guides the yarn onto the beam.

In recent years, quite a few new guide or expansion combs have developed and improvements in the accuracy of existing ones have been made. This has been due to the close co-operation between the mills and the technical staff of the designer and manufacturer. It is essential, therefore, for the manufacturer who designs and makes the particular item used, to have complete detailed specifications for the specific comb required. With such data he is able to supply the proper equipment.

Those manufacturers who have gone into this branch of the industry seriously, maintain a regular organized staff of specialists to assist in the proper selection of such equipment, and thereby have eliminated the guess or trial factor which has always proven so costly and unsatisfactory. Today, such specialized manufacturers supply their customers with regular charts and questionnaires to be filled out and furnished for their study and information. By such methods all misunderstandings, errors and delays are avoided.

Combs and reeds for the warp preparation department of a mill can be divided into the groups and sub-groups listed in the following paragraphs.

Guide combs and reeds—(1) Expansible: spring expansion combs (plain dent and leasing dent); positive expansion combs; fan reeds; and swing combs. (2) Non-expansible: warping reeds and beaming wraithes.

Leasing combs and reeds—Hook comb reeds with open top, either single or double hook; Scotch hook reeds with closed top, either single or double hook; crossing reeds; and pin lease combs.

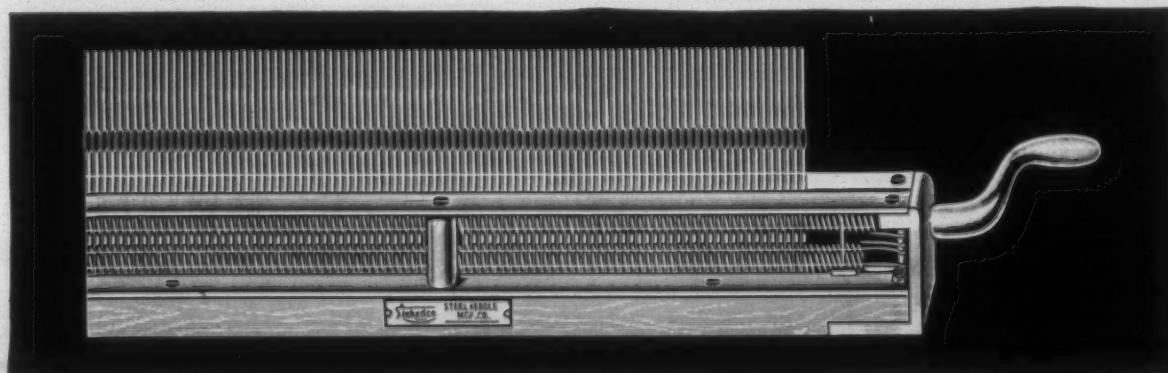
Holding combs—Striking or slasher combs.

The combs and reeds listed above are the ones ordinarily used in the warp preparation department. Among these, the expansible guide combs and reeds are the most difficult for which to work up specifications. Accordingly we shall dwell in detail on these only. In order to properly figure specifications for expansion combs many variables must be considered and we shall not attempt to outline in detail how every conceivable case must be considered, but rather we shall try to give general information which will enable you to figure specifications in the majority of applications.

Spring Expansion Combs

In a spring expansion comb, the dents are held in position by placing the dents between coils of a spring. The spring is expanded or contracted uniformly and simultaneously at each end in the screw type. In the tape type, the hand wheel at the end expands the spring at that end only. If it is necessary to expand both ends the same, both hand wheels must be turned.

The spring expansion comb is an excellent general purpose comb since the dents are set in a straight line, but it is not as accurate as the other types. It is, however, the least expensive comb considering its range. The combs should be sturdily built and equipped with the finest, most uniform



Ste-Med-Co standard spring expansion comb, screw type.



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Wetting out raw cotton in raw stock dyeing machines.

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For rapid wetting out in sanforizing.

For wetting out grey goods prior to kier boiling to insure more uniform boil off and to prevent resist marks in subsequent dyeing.

As a dispersing agent in dyestuff mixtures to insure better solubility and to improve color value.

As a dispersing agent for finishing oils to obtain greater softening value.

In desizing baths with enzymes to produce more rapid and efficient desizing.

For boiling off rayons and acetates.

In the woolen and worsted industry as an aid in fulling and carbonizing.

For dyeing Nylon and Vinyon yarns, hosiery, etc.

For the production of highly absorbent products such as mop yarns, paper mill felts, towels and similar fabrics.

Write to Cyanamid for more complete information on the DECERESOL Wetting Agents. Our representative will gladly assist you in using them to the best advantage.



DECERESOL OT has excellent dye levelling properties. "Grey" cotton fabric (left) dyes unevenly. A dye solution containing 0.05% DECERESOL OT 100% (right) produces uniform, level dyeing.

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*Reg. U. S. Pat. Off.

springs obtainable. Dents should be made from oval tempered steel wire highly polished so as not to chafe the finest yarns.

Positive Expansion Combs

The positive expansion comb is probably the most widely used guiding comb on both warpers and slashers. A well-made comb, provided the section combs have locating pins, will give excellent results. The greatest source of trouble, on very fine work, is experienced at the joints of the section combs. This is largely overcome by the use of locating pins which accurately line up the sections. This comb is mechanically positive in its expansion and contraction and therefore it is considerably more accurate than the spring expansion comb which depends solely upon the uniformity of the spring expansion. Although more expensive than the spring expansion comb, the positive expansion comb is the cheapest of the positive expandable combs or reeds considering its range, which is much greater than that of a fan reed or swing comb.

The most popular length comb section is four inches, although five-inch and six-inch lengths are also standard with us. In a good many cases, particularly on beams of 54 inches or wider, it is more desirable to use the latter lengths since the number of section combs, and consequently joints, are reduced considerably. A good rule to follow is that if over 23 section combs are required, it is desirable to employ a longer link.

Fan Reeds

Fan reeds are designed solely for use on warpers, and are built much the same as an ordinary weaving reed with the exception that the dents are spread considerably wider at

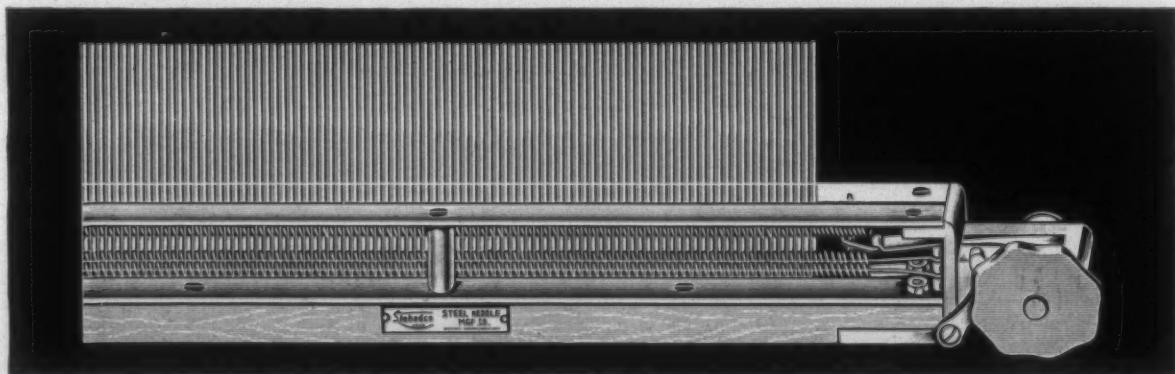
the top than the bottom. Many mills prefer this reed over the positive expansion comb for use in a warper, and although its range is considerably less than the positive expansion comb, the improved results usually justify the purchase of several of these reeds in order to obtain the same range as one positive expansion comb. Undoubtedly, the chief advantage of this reed lies in the fact that it has no joints, which, as everyone knows, can cause high or low spots in the beams.

A fan reed is considerably more difficult to build than an ordinary loom reed, because of the fact that the dents are set at an angle. It is not, therefore, safe to assume that any manufacturer of loom reeds can produce a satisfactory fan reed. In fact, a fan reed constructed by someone not familiar with the correct manufacturing procedure will be considerably less accurate than even a mediocre positive expansion comb.

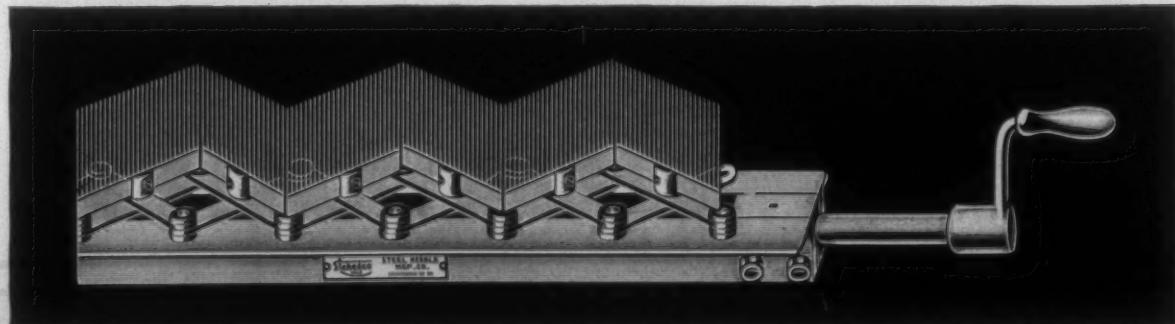
Swing Combs

Swing combs are primarily intended for use on slashers, although they are sometimes used on warpers. Of all combs, the swing comb is undoubtedly the most accurate. Its range is extremely limited when compared with what can be obtained with the spring expansion, positive expansion, or even the fan reed. And, for that reason, the air space of this comb does not vary much from its expanded to its contracted position. The swing comb is really a very accurately made straight comb and does not actual expansion or contraction of itself. It does, however, by swinging either forward or backward adjust the count of the yarn in ends per inch which passes through it.

The warp leasing device for holding the split rods and hook reed is completely adjustable and will adapt itself to any mill's requirements no matter how special they may be,



Ste-Hed-Co standard spring expansion comb, tape type.



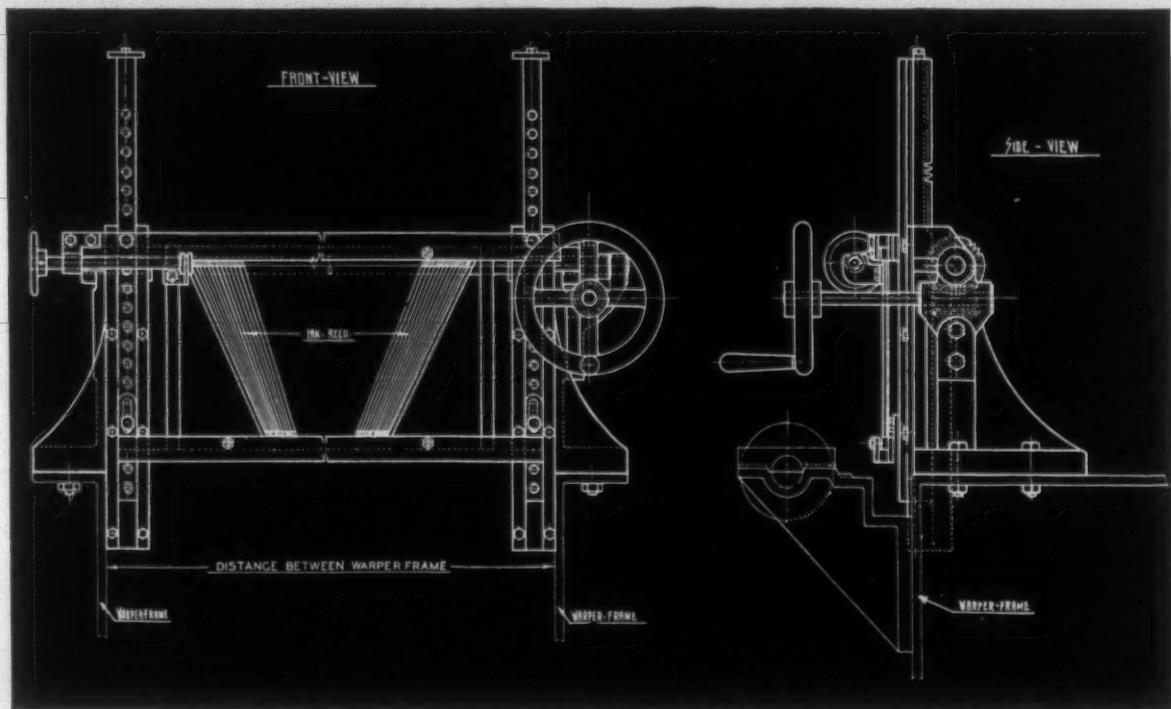
Ste-Hed-Co standard positive expansion comb, warper type.

with installation only a matter of bolting the two uprights to the floor in their correct position. During operation, the hook reed is set in the larger of the two stands, and the split or lease rods are in their respective position on the smaller of the two stands. The rack which supports the rods during the leasing operation is adjustable to any angle, and when not used for this purpose can be swung to the center so as to give free access to the hook reed and the warp sheets.

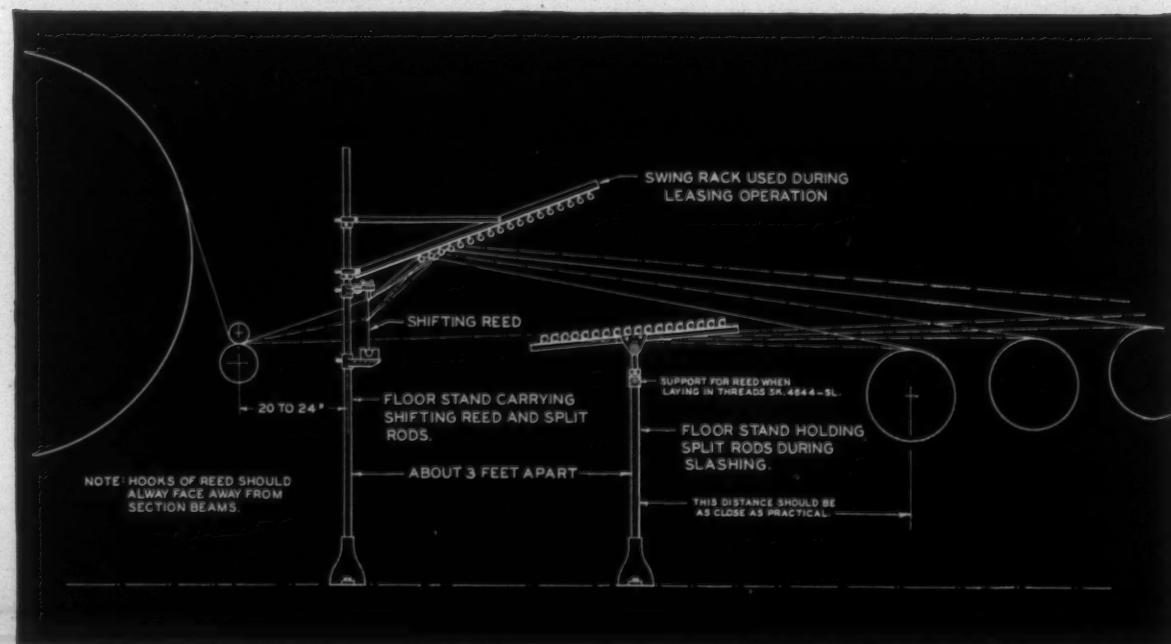
The magnified part of the accompanying illustration shows

how the hook reed is clamped to the small stand during laying-in of the section beam sheets. Upon completion of this operation, the reed is simply moved to its position on the large stand. This device is an extremely simple, yet efficient means of correctly accommodating your hook reed and split rods at the back of the slasher. The illustration shows the most practical arrangement.

In the long run, it is much more practical as well as less expensive to buy proven equipment, rather than attempt to build it in your own plant.



Showing the use of a fan reed holder in warper frame.



Warp leasing device for holding the split rods and hook reed.

Just in case you've eased up...
ON YOUR PAY ROLL PLAN



Pause one brief moment. Compare your lot—and that of the men and women in your employ—with the lot of the infantrymen who meet the enemy face to face, who do the hardest fighting, who suffer the most casualties.

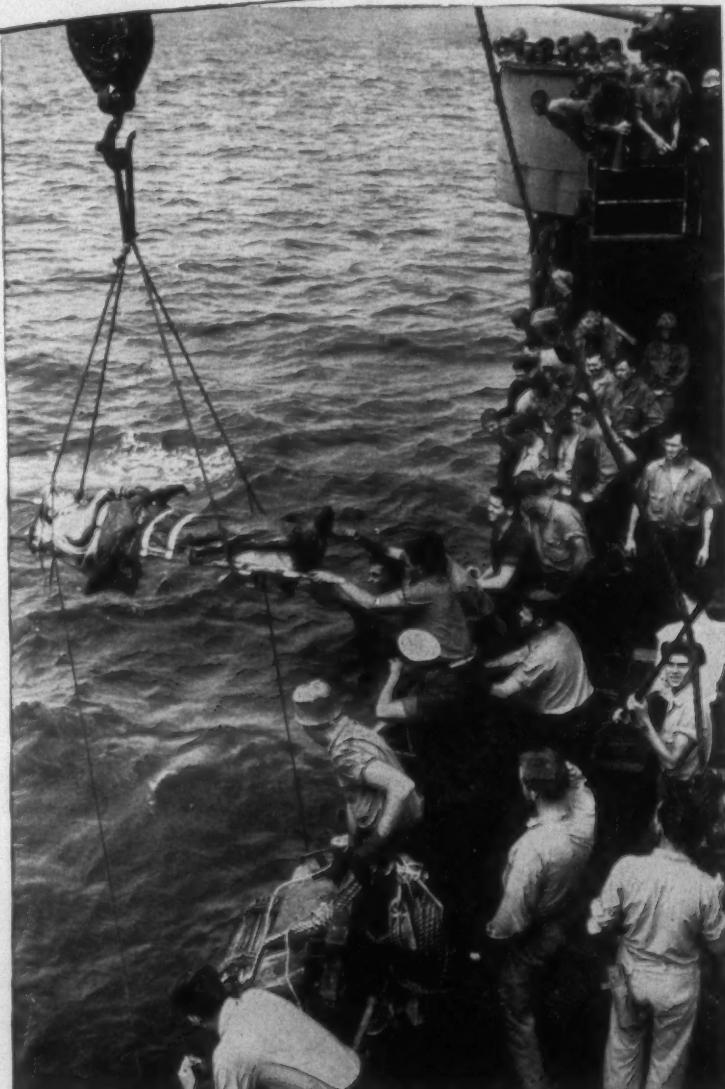
Let the full impact of war's unending grimness swiftly convert any tendency toward complacency into revitalized urgency. Remember—the war is not yet won.

As top management and labor, you've been entrusted with two major responsibilities—steadily maintained production, and steadily maintained War Bond Sales *through your Pay Roll Savings Plan*.

Decide now to revitalize your plant's Pay Roll Plan. Have your Bond Committee recheck all employee lists for percentages of participation and individual deductions. Have Team Captains personally contact each old and new employee. Raise all percentage figures wherever possible.

Don't underestimate the importance of this task. This marginal group represents a *potential sales increase of 25% to 30% on all Pay Roll Plans!*

Your success will be twofold: A new high in War Bond Sales; and a new high in production. Because a worker with a systematic savings plan has his mind on his work—not on post-war financial worries. He's taking care of the future now. His own. And his Country's future. *Help him! REVITALIZE YOUR WAR BOND PAY ROLL SAVINGS PLAN.*



Official U. S. Coast Guard Photo: The elevator to a Coast Guard-operated transport hospital



Back the Attack!
SELL MORE THAN BEFORE!

The Treasury Department acknowledges with appreciation the publication of this message by

TEXTILE BULLETIN

This is an official U. S. Treasury advertisement—prepared under the auspices of Treasury Department and War Advertising Council.

MILL NEWS

ANDERSON, S. C.—The long-delayed installation of machinery at the plant of Textiles, Inc., got under way recently. The plant is located at the site of the old hosiery mill, which was abandoned years ago and used more recently to house a Federal cannery and later a WPA sewing project. The old mill has been renovated and considerably enlarged. Air conditioning equipment has been installed. Work got under way last October. Textiles, Inc., will manufacture rayon fabrics.

TALLASSEE, ALA.—Somé 5,000 were present July 4 at a ceremony held to mark the 100th anniversary of Tallassee Mills, the state's second oldest textile plant. The formal celebration, on the Tallassee high school grounds, featured talks by company officials and veteran employees followed by a barbecue. W. G. Eubanks, chief clerk of the plant, was master of ceremonies. He introduced J. E. Harris, vice-president of Mt. Vernon-Woodberry Mills (Tallassee's parent company), and formerly agent at Tallassee for 17 years. Other addresses were made by B. G. Stumberg, agent, and T. H. Floyd, superintendent. John D. Cottle, who had worked for the company nearly 69 years before

retiring, urged other employees to maintain good working records. Other workers, whose connection with the company has lasted at least 50 years, were seated on the speakers' platform; they were J. F. Burton, S. R. Whatley, C. H. Knowles, Walter Cottle, George Powers, Ben Fincher, Mrs. Mary Jane Edwards, Miss Ollie Knowles, O. C. Leonard, Gordon Strength, Walter Harrington and Mrs. Trudy Hamby. The original mill building, still in use, contained 1,000 spindles and 40 looms with a cotton consuming capacity of five bales each week; the several plants now contain 86,000 spindles and 1,800 looms with a cotton consuming capacity of more than 2,000 bales a week. More than 1,200 peacetime employees are now in the armed services. For war production effort in the current war, officers of the Army and Navy presented their joint "E" award pennant to company officials and workers April 7, 1943.

DALTON, GA.—The output of Candlewick Yarn Co., usually employed in the manufacture of bedspreads, has been allocated to war work, with some 60 persons engaged in making wrapping twine.

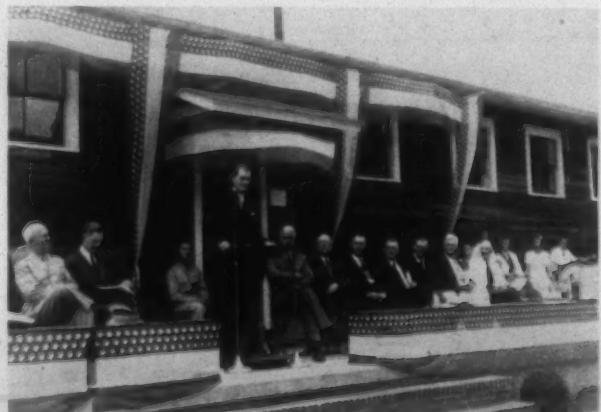
SOUTHERN TEXTILE PLANTS COLLECT MORE "E" AWARDS

MILITARY officers presented Army-Navy "E" pennants for excellent fabric production records to the Rockmart and Cedartown, Ga., plants of Goodyear Clearwater Mills July 6. The flag presentations were made by Brig.-Gen. H. F. Safford, who directs all fabric procurement activities for the Army. "E" lapel pins were presented to the workers by Capt. R. G. Sturges, U.S.N., and Sgt. Michael Riccio. The pennants were accepted at both plants by S. A. Steere, general manager of Goodyear Clearwater Mills, while P. D. Ostrander and L. S. Hall, plant superintendents, respectively, at Cedartown and Rockmart, were masters of ceremonies. Acceptance of "E" pins was made by Mrs. Lula S. Swint and Clifford D. Chandler at Cedartown, and Mrs. Effie Robinson and Albert W. Hubbard at Rockmart. The Cedartown plant is producing cotton and rayon fabrics for tires of all sizes and kinds as well as for self-sealing fuel cells. It has also turned out fabrics for tents, tarpaulins and life-rafts. The Rockmart unit output is devoted to rayon, nylon and cotton fabrics for tires, plus cloth used in fuel cells. Both plants have been operating almost altogether on military products since war began.

Another Goodyear unit at Decatur, Ala., will receive the "E" pennant Aug. 4 from Maj.-Gen. Harry F. Hazlett of the Army. The Decatur plant is also a major supplier of fabrics for tires and other military items.

Other Southern textile plants have also been honored

during the past few weeks for their part in supplying war needs. This recognition is in the form of stars added to "E" pennants, signifying that the several plants have continued to maintain the production records originally honored. Beaumont Mfg. Co. at Spartanburg, S. C., and Chat-ham Mfg. Co. at Elkin, N. C., have each been awarded a third star for plant "E" flags. As announced previously, the Ladlassie Plant of Gossett Mills has won its second star; in addition, the Riverside Plant, also at Anderson, S. C., and the Pendleton, S. C., plant have been similarly honored. A second Army-Navy award in the form of an initial star has been presented to Swift Spinning Mills, Columbus, Ga.

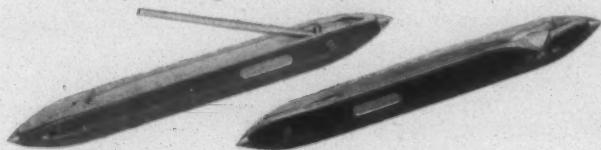


George W. Dolan, president of Mathieson Alkali Works, is pictured as he delivered the acceptance speech during a ceremony June 18 which featured presentation of the Army-Navy "E" to the company's Saltville, Va., plant.

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Charlotte, N. C.

PERSONAL NEWS

F. C. Todd, prominent mill supply dealer of Gastonia, N. C., has been re-elected president of the North Carolina Businessmen's Evangelistic Clubs.

James G. Dixon has resigned as head of the designing and laboratory departments of Brookside Mills at Knoxville, Tenn., to accept a position as stylist for Soule Mills at New Bedford, Mass.



E. V. Wilson

Mfg. Co. and Steel Heddle Mfg. Co., Mr. Wilson brings to his new position a knowledge of cotton manufacturing gained by working in nearly every mill department.

A. L. Fletcher has been placed on the inactive reserve list of the Army and has returned to his duties as chairman of the Unemployment Compensation Commission of North Carolina.

Dr. Glen D. Bagley of Union Carbide and Carbon Corp. recently received the Schoellkopf Medal for development of commercial processes in chemistry. The presentation was made at a divisional meeting of the American Chemical Society.

W. H. Hightower, president of the American Cotton Manufacturers Association, was recently awarded a citation as the Georgia School of Technology graduate who had most distinguished himself during the past year.

E. A. Quintard, formerly assistant superintendent at Swift Mfg. Co., Columbus, Ga., has been promoted to the rank of major in the Army Air Forces. He is now stationed at Dyersburg, Tenn., following a number of months in the South Pacific theater as a bomber navigator.

Dr. Louis O. Olney has retired as professor of chemistry and head of the department of chemistry and textile coloring at Lowell Textile Institute. He is president emeritus of the American Association of Textile Chemists & Colorists, which he was largely instrumental in founding.

Capt. Arthur W. Edwards has been appointed officer in charge of purchasing and contracting for the textile and cordage purchase section at the Jeffersonville (Ind.) Quartermaster Depot. He succeeds Lieut.-Col. Thomas D. Lewis, who has been assigned to an undisclosed mission at another station.

Ernest G. Brown is now general manager of the Lastex yarn and rubber thread divisions of United States Rubber Co.

Alex Shuford, textile manufacturer of Hickory, N. C., has been elected president of the Hickory Community Chest.

Garfield R. MacDonald, chief of the clothing, knit goods and equipage division of the War Production Board's textile, clothing and leather bureau, has submitted his resignation effective Aug. 1.

H. G. Smith, secretary of Callaway Mills, has been named president of the LaGrange, Ga., Rotary Club. Albert G. Dunson, superintendent of Dunson Mills, is a club director.

Lieut. (j.g.) Dock McPhail, prior to the war with Newton (N. C.) Rayon Mills, Inc., rescued four men from a burning ammunition ship in the English Channel on D-Day, according to a recent story in the *London Daily Mail*.

Alexander Charles Grabowski, treasurer and member of the board of directors of Hartford (Conn.) Rayon Corp., and A. F. Mullins, Jr., vice-president and secretary of Avondale Mills at Sylacauga, Ala., have been elected to membership in the Controllers Institute of America. The institute is a technical and professional organization of controllers devoted to improvement of controllership procedure.

John E. Rousmaniere, Henry C. Breck and Robert Strickland have been elected directors of Tubize Rayon Corp. They replace Rufus W. Scott, John W. Mettler and Charles W. McConaughy. Mr. Strickland is president of the Trust Co. of Georgia, Atlanta.

Mildred Gwin Barnwell, executive secretary of the Southern Combed Yarn Spinners Association, has been appointed cotton textile consultant with the military planning and research division, United States Army Service Forces, Office of the Quartermaster General. Her work will be directly under Col. Georges F. Doriot. At the request of Colonel Doriot, Mrs. Barnwell has been granted a leave of absence by the Southern Combed Yarn Spinners Association to render this service. She reported for duty July 10 at the Office of the Quartermaster General, Temporary B Building, 2nd and Q Streets, S.W., Washington, D. C. During her absence, the office of the Southern Combed Yarn Spinners Association will carry on its statistical work, and other association matters will be directed by Caldwell Ragan, president of the association, and the various committees. Mrs. Barnwell will spend a day or two each week, or as often as practicable, in the association office at Gastonia, N. C., in order to carry on her work there.

Robert E. Steere of Curtis & Marble Machine Co. has been elected first vice-president of the Southern New England Textile Club.

Harold M. Manderbach, widely known in the textile industry as an officer of the Philadelphia Quartermaster Depot, has been promoted to the temporary rank of full colonel.

S. L. Bolton, formerly of Alabama Mills Co. at Dadeville, is now superintendent of the Collins-Aikman Corp. plant at Norwood, N. C.

G. R. Dugan, chief of the textile material branch of the Office of Civilian Requirements, has resigned to return to the woolen and worsted field as a selling agent.

Morton L. Church, Jr., son of Charlotte representative of Catlin Yarn Co., has been promoted to the rank of first lieutenant at Foster Field, Tex., where he is an instrument flight instructor.

L. W. Radford, formerly with United States Rubber Co. at Shelbyville, Tenn., is now general overseer of carding, spinning, twisting, winding and reeling at American Thread Co., Tallapoosa, Ga.

D. F. Williamson has resigned as mill engineer for the Shuford group of mills at Hickory and Granite Falls, N. C., to become manager of Lavonia (Ga.) Mfg. Co.

John B. Gaither, formerly assistant production manager for Proximity Mfg. Co. at Greensboro, N. C., has been promoted to the rank of major at the Army's Jersey City (N. J.) Quartermaster Depot.

William Henry Parker, prior to this war a member of the New York sales office of Riverside & Dan River Cotton Mills, Inc., Danville, Va., has been promoted to the rank of captain in the Army Air Forces. Captain Parker is stationed at Morris Field, near Charlotte.

Benjamin Russell, founder of Russell Mfg. Co., will be honored in having a new vocational high school named for him if plans of the Alexander City (Ala.) Chamber of Commerce are successful.

Robert E. Davis has been named manager of the New York office of Newnan (Ga.) Cotton Mills. He has been a member of the organization for 15 years.

Robert P. Walker, formerly a cost accountant for Marshall Field & Co. at Spray, N. C., is now a technical fifth grade at an Army base near Opelika, Ala.

J. D. Burton, formerly of Mooresville, N. C., and Pelzer, S. C., has accepted a position at the newly-erected Excelsior Mills No. Two at Clemson, S. C.

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"Twist-Setter" Machines*

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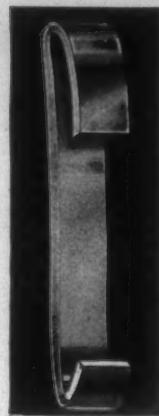


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Contributions on subjects pertaining to textile manufacturing and distribution are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

A Tribute to the South

The following fine tribute to the vision and loyalty of the South by the *New York Herald-Tribune*, one of the nation's most outstanding papers, is appreciated:

The South's viewpoint of world affairs is possibly more enlightened than that of many equal areas in the North. Its population is largely native to the soil, its blood strains are few and its reaction to the coming of World War II was instant and never in doubt. Resistance to tyrants came naturally to men of Southern upbringing, and willingness to fight for liberty and against aggression has been part of their history since the landing in Jamestown. There are few isolationists among Southern statesmen, and they, for the most part, are considered alien to their heritage and are held in considerable disesteem.

The recent record of the South in world affairs is inspiring. Lend-Lease would have been beaten in Congress but for Southern votes. When the first year of the first draft expired, four months before Pearl Harbor, it was Southern members of Congress who insured its extension. When, by one vote, Congress decided not to send all the soldiers home it was the South that turned the scale. Representatives of 12 Southern States cast 102 votes in favor of extending the draft and only six votes against it.

The far-sighted view of affairs across the oceans, illustrated by these statesmanlike steps in time of world crisis, is the more remarkable when it is remembered what might have been the South's natural preoccupation with its growing interest in foreign markets and particularly in export of cotton and tobacco. It is reassuring to find that older parts of the United States, undisturbed by economic changes and the terrific ordeal of civil wars, maintain their patriotism and that it responds instantly to challenge.

All of the above is true but that does not deter a small group of Northern people from constantly trying to direct the behavior and the lives of Southern people.

A New Directory and Old Memories

We are now working upon and will soon complete the 63rd edition of CLARK'S DIRECTORY OF SOUTHERN TEXTILE MILLS.

The first edition of our textile directory was published Jan. 1st, 1912, and it appeared semi-annually on Jan. 1st and July 1st of each year until 1942, when it was changed to an annual publication.

At the same time we changed the pocket edition from semi-annual to annual we began to publish an Office Edition.

The Office Edition of CLARK'S DIRECTORY OF SOUTHERN TEXTILE MILLS is in larger type and contains waste costs, manufacturing margin, price per pound, loom speed and many other tables including cotton statistics. These tables are very useful to men operating textile mills and the Office Edition is sent to every cotton mill in the South.

A perusal of the first or Jan. 1st, 1912, edition brings back memories of textile leaders who have passed, for we note, in that edition, the names of B. B. Comer, Benjamin Russell, Stuart Phinizy, F. B. Gordon, G. Grunby Jordany, Fuller E. Callaway, Sr., Philip S. Tuley, S. Odenheimer, J. W. Cannon, L. Banks Holt, Arthur J. Draper, C. W. Johnston, W. A. Erwin, C. B. Armstrong, Caesar Cone, S. B. Tanner, D. Y. Cooper, R. S. Reinhardt, John C. Rankin, Sloan M. Robinson, D. D. Little, S. F. Patterson, Thos. H. Battle, B. Frank Mebane, Lewis W. Parker, J. D. Hammett, Ellison A. Smyth, Leroy Springs, J. P. Gossett, W. C. Hamrick, Sr., C. E. Graham, F. W. Poe, Jas. A. Chapman, Sr., A. F. McKissick, Alex Long, Walter Montgomery, Sr., Victor Montgomery, Sr., Emslie Nicholson, Aug. W. Smith, W. C. Ruffin, H. R. Fitzgerald and many others who have passed.

Many of those now operating Southern textile mills have no knowledge of those named above but the editor of this publication knew all of them personally and can testify that they were an exceptionally strong group and that the textile industry owes much to each and every one of them.

In those days Southern cotton mills were beginning to make progress against the competition of New England but very few mills were well equipped and the superintendents and overseers were not the efficient men which they are today.

Not only was production per spindle and per loom much lower than it is now but it was a well established practice for Southern yarns and Southern cotton goods to be sold for a lower price than similar goods made in New England.

Listed in Jan. 1st, 1912, were many mills whose names are unknown today.

Among them were Elmore, Ellawhite, Lowe, Ashcraft, Ide, Lang, Barker, Montala, Munford, Valley Creek, Helen, Broadus, Highland City, Premier, Hutcheson, Beverly, Cochran, Hamburger, Meritas,

Paulding County, Elk, Putnam, Home, Union, Park, Millen, Atlantic and Gulf, Wahoo, G. H. Tilton, Senoia, Shoal Creek, Sparta, John E. Smith, Winder, Maginnis, John M. Stone, Yocona, Winona, French Broad, Atlas, Huss, Francis, Hopedale, Cameron, Charlotte Cordage, Elizabeth, Fidelity, Magnolia, Mecklenburg, Vivian, Brander, Delburg, Linden, German-American, Commonwealth, Pearl, Neuse, Victory, Avon, Holland, Trolingwood, Anna, Klo tho, Sevier, Caswell, Kinston, Dickson, Eureka, Saxony, Providence, Manchester, Turner, Icemorlee, Nims, Armon, Caraleigh, Raleigh, Deep River, Great Falls, Robodel, Kesler, Lizzie, Ella, Nantucket, Rhode Island, Bloomfield, Fountain, Tarboro, Alspaugh, Capelsie, Shaw, Bellwill, Brogon, Conneross, Cox, Middelburg, Whitaker, Pine Creek, Royal Bag, Wylie, Octorara, Palmetto, Cowpens, Beaver Dam, Cohannet, Kathrine, Bania, Vardry, Westervelt, Saxa-Gotha, Maplecroft, Pelham, Conestee, Hamilton-Carhartt, Harriss, Wymojo, Walterboro, Warren, Glen-Lowry, Fairfield, W. S. Gray, Woodruff, Tipton, Wariota, Sylvan, Ajax, Alta Vista, Meherrin, Matoaca, Chesterfield, Century and many others.

Even the old timers in the textile industry will find it difficult to recall and place many of these mills but every name was that of a cotton mill which was operating in the South on Jan. 1st, 1912.

Many of them have changed ownership and had their names changed but a considerable percentage went out of business and were dismantled.

It would be even more interesting to record the mill men who were listed in the Jan. 1st, 1912, directory and are still active in the Southern textile industry.

For instance, on the first page of the Jan. 1st, 1912, directory, Scott Roberts, who is now president of the Adelaide Mills, Anniston, Ala., was then listed as treasurer of that company and T. C. Russell was, as now, treasurer of the Russell Mfg. Co. of Alexander City.

Many other names of 1912 are noted as being with the same mill or with some other plants and many sons are carrying on in positions which their fathers formerly filled.

There is also a certain amount of tragedy noted and a certain amount of sadness as we peruse the pages of our first directory, because we note the names of some who were in high places then but because of misfortune or lack of ability were unsuccessful and passed out of the picture.

Some of the names we are inserting in the 1944-45 edition of CLARK'S DIRECTORY OF

SOUTHERN TEXTILE MILLS will be in the 1974-75 edition, which, of course, will have a different editor from that of today, and a few perhaps in the 1984-85 edition but each year will take its toll and many names will not appear when we print the 1945-46 edition.

It has been our good fortune to know the men and the mills of the South for approximately 45 years and since 1912 the publication of each new edition of our textile directory has carried with it the sad task of running a line through the names of friends whom we knew intimately and whose passing we deeply regretted.

Believe It or Not

Walter Gayle, Southern representative of the Saco-Lowell Shops, says:

The Mount Vernon-Woodbury Mills of Baltimore have just finished a new office building and installed fluorescent lighting. There is no way to clean the glasses of this lighting except by unscrewing the facings holding the glasses

They, however, have a field mouse which they use for this work. The mouse goes from one light to another eating the bugs that collect. He makes a trip once a day.

He says that the mouse is not on the mill's payroll.

Foreign Textile Planning

It is reported that Great Britain is making plans for post-war rehabilitation of textile plants which include modern and automatic machinery and these plans extend to India and include entirely new mills to take care of an anticipated demand from China.

Recent advices from Brazil assert that efforts are being made to build up a fund equivalent to \$100,000,000 for the purchase of new textile machinery when the war is over.

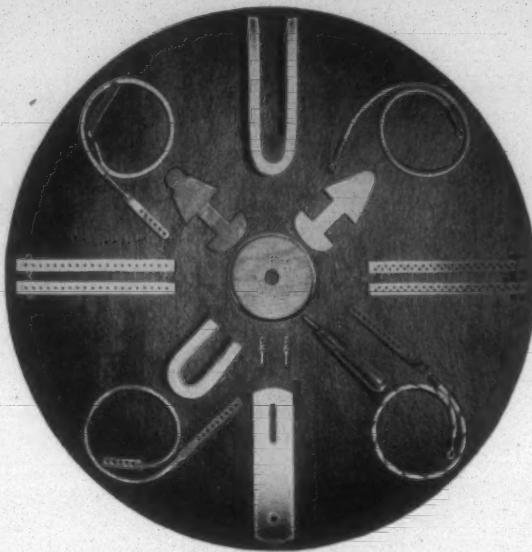
We feel that it is time for the War Production Board to allow a return to the manufacture of the machinery which will be needed to modernize American textile mills.

The war production, now being done by those who normally manufacture textile machinery, can easily be transferred to other war industries and the production of textile machinery would increase the production of cotton goods.

Textile mills, operating on a three-shift basis, have worn out much textile machinery and should be allowed to replace same with new equipment and prepare to meet probable severe post-war competition.



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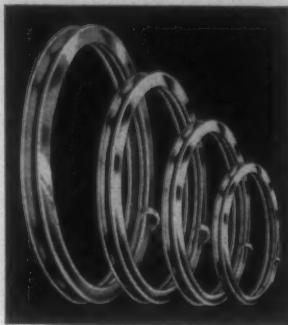


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DYEING AND FINISHING

Notes on Dyes and Dyeing

By GEORGE BROUN

Practical Application of Direct Dyestuffs — Part Four

Part Three of this series dealt briefly with the practical application of direct and direct and developed colors on yarns through use of the different types of skein and warp dyeing equipment. This article will deal with the processing of yarns with these colors on pressure package and beam dyeing machines.

THE original yarn pressure dyeing equipment was grouped under package and beam dyeing machines. Nowdays practically all of the leading types of machines designed for the dyeing of cotton, wool and synthetic yarns under pressure are built so that beams, standard type packages and cheese forms may be processed in one type of machine through the use of different type carriers. Standard type packages are wound on spools and tubes which are perforated and have special coiled springs. The yarn is wound on packages which vary in weight from one to two and a half pounds, but the average weight is not over one and a half pounds for routine package dyeing. The tubes, spools and cheese yarn forms are made of stainless steel, nickel or brass and treated wood pulp. Brass has been practically eliminated for this use during the past ten years, with stainless steel and monel metal now being used for practically all metallic yarn forms as well as carriers for dyeing beams.

A majority of yarn dyeing plants have found it advisable to use knit tubing to cover the metal tubes, springs or spools, thus permitting a better wound package. The treated wood pulp tubes and spools are prepared with a special surface, thus permitting a uniform winding of yarn on package.

The Cheese Package

A fairly recent innovation in package dyeing is the use of the cheese form of package, which was originated and prepared on Barber-Colman equipment. This cheese form of package possesses potential value for many of the package and beam yarn dyers due to some of the practical advantages accruing through its use. One of these is the increased amount of dyed yarn in ratio to number of spools, tubes or dyeing forms used on standard type of package dyeing units when used to maximum dyeing capacity. Another is that the dye liquor ratio can be reduced to a mini-

mum with cheese package forms, as they may carry two to three pounds of yarn, thus reducing the amount of dead space usually taken up by spindles, tubes and spools. This reduced dye liquor ratio should aid the dyer in keeping dye costs to a minimum.

The package machines may have their spindles lined up horizontally from a central control spindle, or vertically from the bottom of machine; with variations each construction has its merits, but all types permit good working conditions. There are two methods of placing the prepared packages of yarns, known as the rigid and spring types. In the rigid, a given number of packages wound on tubes of stated dimensions can be placed on a fluted spindle, then clamped on with a top screw nut or clamp. With the spring type, the packages are placed on spindle and when full, the yarn is forced down and clamped to hold it in place. The differences between the two methods of packing yarns are the increased dyeing variables occurring such as increased pressure, higher dyeing temperature and extra dyeing assistants that may be required where yarns are clamped down on the springs as against the rigid system. During the past few years the rigid system of packaging the yarns on spindles has become more widely adopted.

Simplicity of Beam Carriers

Beam dyeing carriers are of much simpler construction than the package dyeing carriers, tubes and fluted spindles. The beam carriers formerly built of iron or brass are now being built chiefly of stainless steel and monel metal with enclosed head and bottoms opening for central spindle which is usually covered with a strong stainless steel netting for the proper circulation of dye or processing liquors. The chief point of argument between different dye plants is on the diameter of the spindle for beam carrier. A large diameter gives the processing dye liquors better penetrating and leveling action on the yarn to be dyed while a small one allows reduced dye costs but usually requires a longer dyeing period and larger preparation costs. The size of the spindle diameter of the beam carrier is a matter that can only be settled by practical dyehouse runs, as there are many dyeing variables that must be taken into consideration. Among these variables are (1) yarn number, fine or coarse; (2) type of dyestuff to be used; (3) type of pump on dye machine; (4) local dyeing conditions, water supply,

etc.; (5) small diameter permits large amount of yarn to be dyed and on large diameter this is reduced in ratio to reduction in diameter of beam cylinder.

In the past, the handling and drying of the dyed yarn was a long drawn-out series of different operations; the dyed yarn was removed from package machine and packed carefully in a centrifugal hydro-extractor, extracted carefully so as to keep the packages in uniform condition, and then placed on shelves in a forced circulating hot air dryer. This drying required 12 to 24 hours or sometimes longer, according to size and type of yarn in package. Most of the dyeing machine makers now have a hot air pressure or suction drying frame stand whereby the package of beam of dyed yarns may be extracted partially or fully dried. These extraction and drying stands help to reduce these operations considerably compared to the time and labor required by older methods.

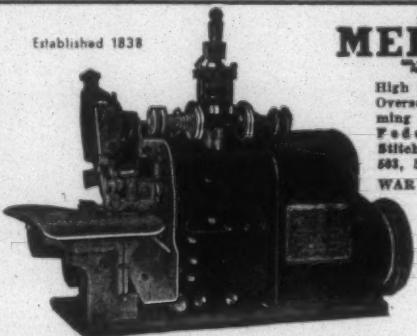
The standard type package and cheese forms of package yarns may be processed on cotton yarns at the maximum size, smaller on spun synthetic yarns, and less than a pound per package on filament synthetic yarns. These differences in size of packages are due to the degree of penetration and levelness obtained on each type of yarn being dyed. There are three methods of handling the direct and direct and developed colors on package and beam machines; these are the one bath, two bath, and split bath methods.

One Bath (No alkalies in bath unless specified for dyestuff. All percentages based on weight of yarn.) Dyeing liquor is 1:8 to 12. Reverse valves every five or ten minutes. Enter into dye machine's expansion tank two to five per cent penetrant. Start cold or at 100° F. Set valves inside out, raise temperature to 140° F. and run 20 to 40 minutes at 140° F., reversing valves from inside out to outside in at five-minute intervals. If there appears to be difficulty in the wetting out liquor penetrating the package yarns and only by-passing or channelling the package, then increase amount of penetrant and raise temperature to 160° F. and run sufficient time for thorough wetting out of yarn by reversing valves. After yarns are wet out, shut off steam and enter dissolved direct colors in two or four parts over two and one-half or five-minute intervals at 140 to 160° F., run at this entering temperature for 20 minutes, reversing valves at five-minute intervals, then raise temperature to 180° F. to 200° F. (light boil), run 20 minutes, add common salt or Glauber's salt in two portions (with steam valve shut off), open steam valve and run 30 minutes at light boil, sample for shade; if correct, give a running cold wash until clear, then finish up with yarn softener ready for extraction and drying.

Two Bath (All percentages based on weight of yarn. Dyeing liquor ratio 1:8 to 12. Reverse valves every five to ten minutes.) Enter into dye machine expansion tank one per cent mild alkali (soda ash, trisodium, phosphate). Boil out 30 minutes, drain bath and enter fresh bath for dyeing. Wherever the package or beam yarns are difficult to penetrate it is advisable to always add one to three per cent wetting out agent in with the boil out bath, thus insuring thoroughly penetrated yarn ready for dyeing. For the dye bath, enter one per cent penetrant with the dissolved direct color at 120° F., raise to 180° F. or 200° F., running 30 minutes, then adding common or Glauber's salt and running at desired temperature for 30 to 40 minutes, sampling for shade and finishing up. Drain dyebath, rinse until clear, add softener and finish.

Split Bath (No alkalies in boil out bath. Two to four per cent penetrant or synthetic detergent.) Enter at 120° F., raise to 200° F., run 30 minutes, drain one-half of bath, fill up with fresh water, thus giving a bath temperature of 140 to 160° F. Enter one per cent penetrant and add dissolved direct dyestuff in two portions over five minutes. Run ten minutes, then raise bath to boil, running 20 minutes before salt is added in two parts. Run 30 minutes at boil, sample and finish up.

Whenever it is necessary to shade or add additional direct colors to either a package or beam machine, always cut off steam and select only direct colors that exhaust very slowly at high temperature and in a salt bath; otherwise the color addition may exhaust chiefly on the inside or outside of beam or package. It is most practical where shading a dye lot to drop a portion of dye bath so as to cool it to at



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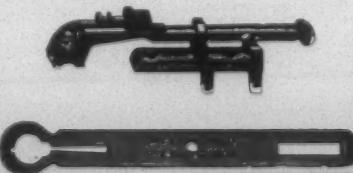


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least 160 to 180° F. before adding the fresh color. Many dyers prefer to start off in a fresh bath, but that is usually uneconomical and delays production and does not give a dyer satisfactory records for calculating color formulas.

In running direct and developed colors, dyers find that a cold rinse after the direct dye bath is usually sufficient before entering the diazo bath. If the local water supply is hard, it is best to add a small amount of water softener or sulfonated alcoholate to the cold rinse baths both before and after the diazo and developing baths. Some dyers use sulfuric acid in place of muriatic (hydrochloric) acid in with sodium nitrite for their diazotizing bath, but the best textile chemists and dyers agree that this is not good economy although it appears to be a money saving act. The reasons that substitution of sulfuric for muriatic acid may not be good practice are: (1) diazotizing baths are carried out more quickly with muriatic than sulfuric acid; (2) muriatic acid does not exert the high tendering action on cellulosic fibers as sulfuric; (3) chemical salts formed with muriatic acid are chlorides which are more soluble and easily rinsed from yarns as compared to the less soluble sulfate compounds formed from sulfuric acid; (4) it is very desirable to have the package and beam yarns free from any acid condition or salts before entering the cold alkaline developing bath, otherwise the shade may not be fully developed and the yarns will not be well penetrated.

Selection of direct for package and beam machine depends upon the following properties: (1) colors must be very soluble; (2) colors must not be affected by salt, metal or acid or alkaline chemical action or finishes; (3) colors must be slow exhausting at high temperature without salt in bath; on addition of salt they should exhaust slowly but fully; and (4) developed and aftertreated colors must have uniform developing and aftertreating properties from lot to lot, otherwise they should not be used together in formula if they vary noticeably.

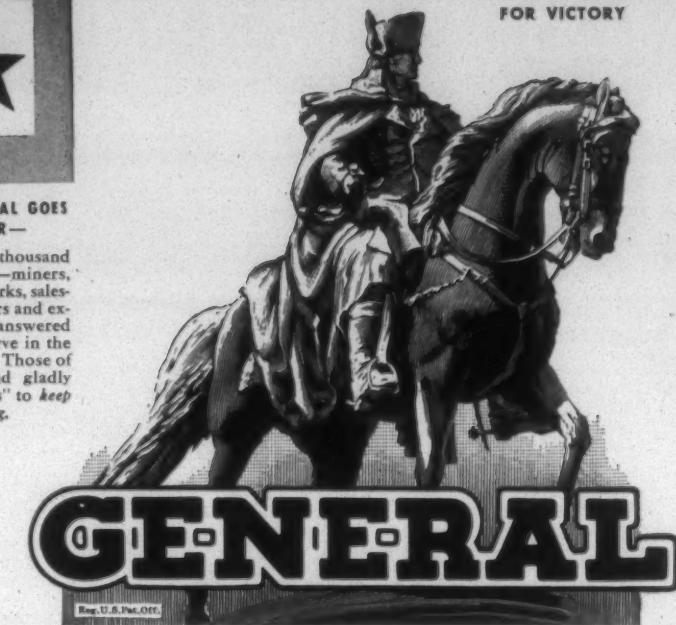
The one bath method is best for handling direct colors on beams, especially when a dyer has trouble with blowing a beam by the two bath method. Thus great care must be shown in not cooling a boiled out hot beam too quickly and then entering cold water in the bath, as it may blow the beam.—(To be continued.)



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A manufacturer located in the United States who owns manufacturing plants in several countries, desires to employ a loom fixer for their cotton mill and finishing plant which is located in a large industrial South American city. For further particulars, write to address below.

Address "South American,"
care Textile Bulletin.

Wanted—Superintendent or Assistant Manager

A manufacturer located in the United States who owns manufacturing plants in several countries, desires to employ Superintendent or Assistant Manager for their cotton mill and finishing plant which is located in a large industrial South American city. For further particulars, write to address below.

Address "Manufacturer,"
care Textile Bulletin.

If you have mop material of any kind to offer, write

CHRISTIE MOP & BROOM WORKS
Knoxville 16, Tenn.

WANTED

General Overseer for Carding and Spinning. Production 150,000 pounds a week, coarse yarns; \$70.00 per week and bonus; yearly pay better than \$4,000.

Write "Production,"
care Textile Bulletin.

New Firm To Handle Yarn

Textron, Inc., has announced the sale of its yarn dyeing business to a new corporation bearing Textron's former name, Atlantic Rayon Corp. Atlantic Rayon Corp. will have its headquarters at 86 Crary Street, Providence, R. I. The new organization includes the complete management, personnel and sales staff of the former Textron division, and will be licensed to use the Textron patents and methods for yarn dyeing purposes. The Atlantic Rayon Corp. sales offices will continue at Providence, New York and Philadelphia.

Textron, Inc., will continue its throwing business at the firm's plant in Lowell, Mass., and will market its output of synthetic yarns through Atlantic Rayon Corp.

Wool Imports Restricted

Because of a heavy accumulation of contracts for unshipped wool now held in South American ports, the War Production Board stated July 11 that it was not expected that any import licenses for South American wool

would be granted in the immediate future. It was pointed out, however, that at such time as shipping space becomes freer, licenses for the importation of these wools are expected to be granted without reference to restrictions as to their end use. Licenses granted in the past were issued only on the condition that the wool be used in the manufacture of apparel items.

Company Ownership Changed

Announcement has been made of the retirement of Mrs. Loree Hollister Appell from the partnership of Hollister-Moreland Co. at Spartanburg, S. C. The company will continue under the same name, with R. B. Moreland as owner and directing head. Mrs. Appell, the former Mrs. Loree Gaines Hollister, was married recently to Lieut. George C. Appell of New York and will make her home there. Hollister-Moreland Co. was organized in November, 1942, to act as distributor for Merrow Machine Co., American Safety Table Co., Dinsmore Mfg. Co. and H. Maimin Co. The company has recently occupied new offices at 611 Montgomery Bldg., Spartanburg.

Belting Handbook Published

J. E. Rhoads & Sons of Philadelphia, makers of industrial leather belting, recently published and made available the "Tannate Handbook," which may be used for the solution of belting problems. It gives information on short center, modern group and individual drives; tells how to lace belts or make them endless; and offers suggestions for improving belt drives, aligning pulleys and belt care. The booklet is free to those concerned with belt maintenance; address the company at 35 North Sixth Street, Philadelphia 6, Pa.

New Type Matting Available

A new type of matting for use in many places where rubber matting was formerly used has just been made available by American Mat Corp., 1789 Adams Street, Toledo 2, Ohio. This new product, which is being marketed under the name of Ameritred, is a solid plastic friction type mat made by firmly binding friction compound together by a plastic. It is ideal for use in building entrances, lavatories, shower and locker rooms, as hall runners, stair treads and landing mats, on ramps and for covering worn spots on floors. It lies flat and affords a non-slip surface. By keeping feet off cold floors and reducing fatigue it increases efficiency and production. It promotes sanitation, good scrapeage providing easy removal of dirt from traffic. A factor in reducing breakage also is afforded. Jet black in color, it comes in easily handled and easily cleaned sheets. It does not swell as rapidly as rubber where exposed to various types of oils. This plastic friction type mat can be trimmed to fit small or odd shaped areas.

Testing Method Is Approved

The acceptance of a new revision of commercial standard CS59-44, Textiles Testing and Reporting, has been announced by the National Bureau of Standards, Department of Commerce. This is a revision made at the request of the Textile Fabrics Association, the National Association of Dyers and Cleaners, and the American Association of Textile Chemists and Colorists of the original standard developed by the Bureau of Standards for dress fabrics at the request of the National Retail Dry Goods Association in 1934.



"BIG INCH"
Leather Belt

36" wide by 147 feet, extra heavy 3-ply are the dimensions of this big drive we recently installed for Carter Mills. This belt is a main drive, running the entire mill, powered by a 600 h. p. Diesel engine—weight approximately 1300 pounds.

MADE UP IN FIVE DAYS

And we are equally proud of an order for a quantity of 1/2" by 29 1/2" drive belts we recently delivered.

Our facilities and service are not based on the spectacular, but they are as dependable in an emergency as they are in routine.

W. D. DODENHOFF COMPANY
INCORPORATED
GREENVILLE, SOUTH CAROLINA



Half-Year Rayon Shipments Establish New Record

Shipments of rayon yarn by American producers totaled 263,300,000 pounds during the first six months of 1944, states *Rayon Organon*, published by the Textile Economics Bureau, Inc. This figure, which represents a new high for any comparable period, is nine per cent above shipments of 242,600,000 pounds reported for the first half of 1943. For June alone shipments totaled 44,400,000 pounds against 45,400,000 pounds in May and 39,600,000 pounds in June, 1943. Six months' shipments of rayon staple fiber to domestic consumers aggregated 82,700,000 pounds as compared with shipments of 78,700,000 pounds in the first half of 1943, an increase of five per cent. In June staple fiber shipments were 14,400,000 pounds against 14,600,000 pounds in May and 13,300,000 pounds in June, 1943.

Stocks of filament rayon yarn held by producers totaled 7,900,000 pounds June 30 against 8,100,000 pounds held May 31, and 6,500,000 pounds held June 30, 1943. Staple fiber stocks held June 30 totaled 2,300,000 pounds as against 2,500,000 pounds held May 31 and 2,900,000 pounds held June 30, 1943.

Warwick Chemical Opens New Plant

The Warwick Chemical Co. Richmond Works plant at Wood River Junction, R. I., which was ceremoniously dedicated June 28, is expected to be in full operation on or shortly after the first of August. This will be the fourth operation unit for Warwick Chemical Co., other plants being located in West Warwick, R. I., Rock Hill, S. C., and Chanute, Kan. Sales offices are at 580 Fifth Avenue, New York City, and a research laboratory at 221 West 57th Street, New York City.

The Richmond Works was named in honor of Frank Richmond, chairman of the Warwick board of directors, as well as chairman of the board of the Crompton Co. The principal speakers at the dedication ceremonies were J. Howard McGrath, governor of Rhode Island, Ernest Nathan, president of Warwick Chemical Co., and Mr. Richmond. Governor McGrath paid tribute to Mr. Nathan, who is one of the founders of the company and who is chiefly responsible for its rapid growth. Mr. Nathan traced the growth of Warwick from a small building in West Warwick to its recent state of expansion.

Chemistry's Role in Textiles Depicted

Of much interest to dyers and finishers is the current series of Burkart-Schier Chemical Co. advertisements relative to the role of chemistry in the development of textiles. This series will continue for some months, and upon completion will be published by the company in permanent booklet form.

Over 500 textile chemists have already indicated their desire for a copy of the booklet. Other interested persons may put in an advance request for the volume containing the completed series by filling out the coupon at bottom of the Burkart-Schier advertisement on page 23 of this issue and mailing it to the company at Chattanooga, Tenn.

Restrictions on the use of copper textile print rollers were lifted July 5 by the War Production Board.

5 reasons why you should **DESIZE WITH** **EXSIZE***

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1. Safe, even for the sheerest fabrics. Contains no harsh alkalis or chemicals. Gentle, thorough action. Cannot weaken cloth.
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Use our laboratories for your tests. No obligation. Or, if you prefer, a trained Pabst field man will gladly work with you in your own mill. Write for our free booklet.



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CHICAGO, ILLINOIS

Warehouses at New York, and Textile Warehouse Company,
Greenville, S. C.

Copy, 1944 Pabst Brewing Company, Milwaukee, Wis.

Newly-Developed Cotton Textile Products Announced by Dan River

(Continued from Page 24)—or as a part of the dry film of bonding material, is fast and permanent, and the porosity may be fully controlled.

U. S. Patent 2,220,958, also issued to Mr. Jennings, covers the product as well as the art of increasing the tensile strength and decreasing the stretch of textile yarns by the application of bonding materials. This process is applicable to all types of fibers in their various forms and is not limited in the kind of bonding material used. This invention is also covered in foreign countries and there are numerous improvement applications in process. In this product the increase in tensile strength alone gives to the industry what actually amounts to a new basic cotton textile product—a new article of manufacture for new as well as old uses. The tensile strength and stretch of yarns produced under this patent may be varied to suit the particular purpose for which they are to be used, thus enabling them to be used where linen or other fibers were formerly considered essential.

Products based on the Jennings patent are now being produced for the armed services, furnishing convincing evidence that through this type of chemical association cotton will be fully competent to meet and surpass much of the competition from synthetic fibers. This process covers a broad field of physical, mechanical and chemical investigation. The ownership of the Bartell, Jennings and other patents, together with numerous patents pending, places the Dan River Mills in an enviable position in the industry. The trademark, "Fiber-Bonded," is owned by Riverside & Dan River Cotton Mills, Inc., and is used to designate these high strength yarns and fabrics.

Other processes on which Dan River Mills hold patent rights may be regarded in some respects as collateral to the three basic patents described, and include two patents in the name of Lloyd C. Copeman which relate primarily to the treatment of knit and woven fabrics to produce slip resistance. Other Jennings patents relate to the treating of fab-

rics to make them impervious, flexible and durable, particularly for use as diaphragms in fuel pumps, and to the recovery of solvents from substances or materials treated with a solution of resinous substance in such solvents.

Developments and new applications of the various processes described above and numerous other developments are proceeding in the company's research division, with every prospect that further results having a great practical value will be obtained. The success which has attended the evolution of the Dan River research program has brought to the company's executives and specialists the conviction that cotton will be able not only to hold its ground in its old and well-established markets, but that it can advance into new apparel and industrial fields with characteristics and virtues which other fibers, natural or synthetic, cannot match on equal competitive terms.

Army To Procure More Nylon

Finding that it must have fabric of greater resistance for jungle clothing, insect nets and sleeping bags, the War Department has announced that it would procure 28,000,000 square yards of nylon products before the end of the year.

The procurement will be made through the Philadelphia Quartermaster Depot, which will send contracting officers to New York to negotiate contracts for the needed fabrics. These fabrics include a twill to be used in fabrication of lightweight ponchos; a woven insect netting to be used in insect bars, head nets and jungle hammocks, and a taffeta used in such special items as sleeping bags.

Late in June, representatives of the Quartermaster Corps, the Philadelphia Depot and the War Production Board met in the National Federation of Textiles, Inc., New York, with more than 100 weavers, throwsters and finishers in the nylon industry and outlined the specifications for these new fabrics. Industry's co-operation was asked for in meeting the Army's needs.

At the present time the Army has no stocks of these fabrics in depots but has under contract some 15,000,000 square yards.

★ ★ ★ ★ ★

Weave for Victory with



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"The Weaver's Friend"

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CHARLOTTE, N. C.

Institute of Textile Technology Moves Into New Quarters

The Institute of Textile Technology, which was incorporated under the laws of Virginia last April, has now begun assembling its staff and equipment and has moved into its temporary quarters on Rugby Road, near the University of Virginia, Charlottesville.

The institute is a non-profit educational institution at the graduate level, with a research organization specializing in the field of textiles. In addition to carrying on graduate education in the sciences, it will carry on project research work for the benefit of its supporting members, some 108 textile mills in 13 Eastern states.

The staff will eventually number about 100 men, the majority of them holding doctor's degrees. Except for the administrative members and instructors in specialized sciences, the staff will be composed of men now engaged in the textile industry. Twenty-eight staff members have begun work in the laboratories already fitted out in the temporary headquarters.

In the near future, the erection of permanent buildings is planned on one of several sites on the outskirts of Charlottesville which are now being considered. In colonial style, patterned after Jefferson's architecture, buildings of the new institute will include dormitories, physics and chemistry buildings, an assembly room, administration building, library and applications building which will include one piece of every type of textile machinery in existence.

Instruction will be offered the student body in chemistry, physics, micro-biology, fiber identification, electronics and phases of engineering, beginning in February or the early fall of 1945. A two-year course leading to a master's degree, and a four-year course leading to a doctor's degree in textile chemistry and textile technology will be given a student body limited to 60. Only 15 students, drawn from institutions all over the world, will be accepted each year. Arrangements have been made to teach technical German, French and possibly Russian.

All work carried on at the institute will fall into one of two classifications, either work which is the property of the institute, and through it of its membership, or work that is the property of some co-operating mill or industry. Each staff member and student will sign a patent waiver to the institute. Every month member mills will receive copies of the institute bulletin, "Library Notes," consisting of abstracts from domestic and foreign textile periodicals.

Ward Delaney, former associate director of the Institute of Paper Chemistry, the only similar organization in the world, is president of the new institute. A native of Louisiana and a graduate of Tulane University, Mr. Delaney has been active in research. Dr. Julian F. Smith of Chicago, technical editor and librarian of the institute, is now acquiring technical literature and library materials. He was formerly connected with the Kresge Hooker Library in Detroit. Arthur M. Allen of Baltic (Conn.) Mills will serve as secretary to the corporation, while Roger Milliken of Deering, Milliken Co., New York, will be treasurer. L. C. Leatherland, a graduate of Virginia Polytechnic Institute and formerly in charge of research and development of the Sylvania Industrial Corp. at Fredericksburg, have arrived at Charlottesville to join the staff. C. B. Cooper, comptroller, was formerly connected with the Texas Co.

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The trade knows that modern standards . . . war standards . . . demand A-1 quality. And they know, because of 68 years of experience, that BORNE SCRYMSE WOOL OILS give them not only the highest quality but value as well.

- ★ BRETON OILS FOR WOOL
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Highest quality also in:
Apron Oils • Shear Oils • Loom Oils
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Originators of the BRETON MINEROL PROCESS for FIBRE CONDITIONING
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W. B. Uhler
Spartanburg, S. C. R. C. Young
Charlotte, N. C.
John Ferguson
La Grange, Ga.

S. T. Douglas, Jr.
Westwood, Mass.

W. M. Dynes, West Springfield, Mass.

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INVITES OFFERS of cotton and rayon fabrics for its branches in the Dominican Republic, Cuba, Haiti, Honduras, Guatemala, El Salvador, Costa Rica, Colombia, Venezuela, Surinam and Curacao.

Cotton Goods Market

A break in the past fortnight's inactivity in Worth Street seems to have resulted from a warning by military officials that the production of vital war materials was being affected by the withholding of merchandise. At a meeting of selling agents in New York an appeal for continued deliveries of military goods was presented, and market factors immediately responded by releasing stocks accumulated during the past two weeks. Shipments of print cloths as well as other gray goods fabrics had been withheld pending announcement of prices by OPA, and with the trade expecting these new ceilings momentarily for the past two weeks, goods earmarked for military need were among those held up.

Discussions on cotton products pricing arising from the Stabilization Act of 1944 got under way June 30 between cotton industry executives and government officials in Washington. This meeting was called by Byres H. Gitchell, acting director of OPA's consumer goods price division, to secure the help of the cotton industry in working out policy and procedural questions pertaining to changes in the cotton pricing schedules made necessary by the new provisions included in the revised price control act. Under one amendment, OPA ceiling prices on each major item made in whole or major part from cotton or cotton yarn must reflect parity to cotton producers.

Percentages of the output that cotton textile producers are required to set aside during the third quarter of 1944 to meet export orders were announced July 6 by the textile, clothing and leather bureau of the War Production Board.

One new provision in M-317 automatically cancels all preference ratings assigned by the Foreign Economic Administration to export licenses and release certificates which are not applied to an order, or made the subject of a WPB scheduling direction within six months from the date of issuance. Excepted from this provision, however, are ratings applied to orders accepted or made the subject of WPB scheduling directions prior to Aug. 1, 1944, and which call for delivery before Oct. 1, 1944.

These amendments to M-317 also make changes in the conditions under which export orders may be accepted. For example, the provisions of subparagraph (d) (1), which were to have been changed July 1, will continue in effect until further notice. The new provisions of this subparagraph which the May 29 amendments announced as effective July 1, have been postponed.

The Column V provisions, which prior to the amendments related to woven cotton fabrics, have been eliminated, and Column VI of the order, as amended May 29, 1944, now becomes Column V.

J. P. STEVENS & CO., Inc.

fabrics for diversified uses

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EMPIRE STATE BUILDING

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Cotton Yarns Market

The Philadelphia sales market at the middle of the month was still awaiting the Office of Price Administration's release of the new ceiling price set-up for cotton yarns. It is said in the market that whereas buyers of yarn for civilian uses may sometimes get a yarn order accepted on an open-price basis, as permitted temporarily by OPA, manufacturers of war goods must state definitely what their contract prices are. Thus conditions have favored the acceptance of commercial orders rather than military contracts.

Despite continued arrival of inquiries for rated and commercial yarn supplies from all branches of the industry, including some integrated manufacturers not heard from before, acceptance of offered business has remained at the minimum that could be handled within the 30 days. Right now, under normal conditions, knitters should be covered ahead at least to Dec. 31, and weavers at least to the end of next October, for their minimum known requirements of sale yarn.

Entering the second half of July, the average sale yarn mill is represented as having only three to five weeks unfilled orders on the books. This is said to include rated orders. On the surface, this makes it look as if the spinners, by and large, will be open for substantial new business when the new OPA price setup is released.

As a result of recent adoption by Congress of appropriate legislation covering methods of, and preparations for war contract termination, the armed forces now are in a position fully to protect the termination of sub-contractors, among whom the sale cotton yarn spinners are numerous.

Consumption of cotton is still dropping, as reflected in the July report of the Census Bureau. Cotton lint consumed during June this year totaled 805,735 bales, compared with 831,889 bales the previous month and 918,433 bales in June, 1943. Consumption for the 11 months ended June 30 totaled 9,217,903 bales of lint compared with 10,260,214 bales in the corresponding period of 1943. Cotton spindles active last month numbered 22,373,494, compared with 22,387,784 in May this year and 22,789,238 a year previously. These totals were divided as follows: in cotton-growing states, 17,340,982, compared with 17,348,012 in May this year, and 17,400,174 in June last year; and in the New England states, 4,480,114, compared with 4,491,572 and 4,792,348.



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Manufacturers of Textile and Sanitary Supplies

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STERLING RING TRAVELER CO.
FALL RIVER, MASS.

Facts About the Cotton Textile Situation

(Continued from Page 19)—higher than in any of the preceding 11 months. As in the case of denim, 3.90 yard chambray is also in heavy demand for civilian work wear. Before the end of the year the Navy, according to its own admission, will need 25,000,000 chambray shirts in addition to those already on order. In 1943 12,000,000 of these shirts were delivered to this branch of the service. Since all chambray is manufactured to the rigid specifications and strict inspection of the Navy, it is obvious that quality standards have more than been upheld.

Canton flannel is the fabric used chiefly in the manufacture of inexpensive cotton work gloves. Like all other essential cotton products, demand for them has swollen to unheard of proportions. Canton flannel has other military uses, among them gun patches for cleaning and oiling rifles. Production statistics are shown in Table IV.

TABLE IV

PRODUCTION OF CANTON FLANNEL

	Linear Yards
1939	26,900,000
1940	34,700,000
1941	44,000,000
1942	52,200,000
1943	52,700,000
1944 January	5,600,000
February	5,300,000
March	5,500,000

It will be noted from the above that production in 1943 was almost 100 per cent higher than in 1939 and monthly production in 1944, if maintained, will result in an annual production of more than 60,000,000 yards, the largest ever achieved.

To assure a continuous supply, WPB in June, 1943, froze all equipment and to prevent the diversion of the fabric to other uses ordered that no less than 85 per cent of all canton flannel produced be sold for the manufacture of work gloves.

All cotton textile yarns and fabrics are under OPA price ceilings. The first of these ceilings were imposed in May, 1941, six months before Pearl Harbor, and all the industry's products were under strict price control by May, 1942.

Since then all production costs have increased. Raw cotton prices have advanced from 20.04 cents per pound to 21.2 cents. Average hourly earnings have increased from 45.1 cents to 60.5 cents. Unit labor costs, reflecting the great increases in inexperienced labor, have climbed 42 per cent. Other costs such as coal, starch, oil and mill supplies have moved up.

Despite mounting costs there have been few changes in price ceilings. As a result many mills are being squeezed between rising costs and fixed ceilings. Low price fabrics have been and still are the victims of this squeeze. These fabrics have always been sold on a very competitive basis with only a thin margin of profit. This margin was quickly wiped out by rising costs and over a period of months some important fabric costs were higher than ceiling prices.

In the statement of considerations granting an increase of three to four cents per yard in the price of denim and one cent per yard for chambray and covert, OPA stated that

ROY CARD GRINDERS
STANDARD SINCE 1868

CARD GRINDERS FOR
Cotton, Woolen, Worsted
and Asbestos Cards

TRAVERSE GRINDERS FOR
Card, Sanforizer and
Calender Cylinders

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Napper Grinders, Shear Grinders
Portable Lathe Beds
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All types of Traverse and Roller Grinders
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Replacement parts available.

B. S. ROY & SON COMPANY
WORCESTER, MASS.
GREENVILLE, S.C.

"only one producer of chambray and covert at the present ceiling price for these fabrics has any margin over total unit cost. The cost situation with respect to denim producers is practically the same, with only two producers having costs lower than the ceiling price."

In the regulation granting relief on certain types of bed linens, OPA stated that "during September, 1943, seven representative producers of bed linens who together account for over 40 per cent of the Type 128 output, submitted cost data; which, on the basis of comparison with costs obtained in a study made in November, 1942, are believed to be accurate. The data indicates that present ceiling prices are below such cost for all of the Type 128 output."

It has been the custom of the cotton textile industry for many years to produce canton flannel in a variety of weights. In December, 1941, the Cotton-Textile Institute, with a view to conserving material and simplifying production, initiated a program to eliminate unessential weights and weaves of canton flannel. After a conference with flannel manufacturers and producers and distributors of work gloves, the National Bureau of Standards promulgated a recommendation that the fabric be produced in nine weights and two weaves.

According to the Bureau of Standards, the simplification offered the consumer better values, better quality and better service in delivery and repairs. These nine weights are still being produced. The choice of a particular weight for the manufacture of gloves rests, of course, with the glove manufacturer.

Shifts in Cotton Textile Production

The cotton textile industry frequently has been charged with shifting production from low priced essential fabrics to high priced less essential fabrics, thus unnecessarily increasing the cost of living. The extent of this shift has been grossly exaggerated.

The most important shifts were made under directives of WPB. For example, 20 per cent of the denim looms were shifted to bagging material; a certain amount of towel equipment was shifted to the production of the same material. Bed sheet equipment was shifted to the manufacture of Army raincoat fabric.

The extent to which a mill can voluntarily shift its production is very limited. In the first place, about 70 per cent of the industry is operating under directives of WPB and the mills covered by these directives are unable to switch from one fabric to another. Secondly, free choice of action is limited by the type of equipment in a given plant. Except in a very few plants the output must take the form of closely allied products. A mill equipped to make denim cannot make lawns or voiles, and a fine goods mill cannot make denim or chambray. In the majority of cases a mill can move only within a very narrow range.

A striking example of unfamiliarity with the shifts forced upon the industry by governmental action occurred only recently. The American Home Economics Association in a survey urged that 80 x 80 percale or at least "64 x 72" construction be supplied for the manufacture of house dresses. It added that at present only "64 squares" are available. Now the War Production Board some time ago ordered that 80 x 80 print cloths were to be sold on priority ratings only, which means that sales are confined entirely to



When you are searching for the right belt for the right drive . . . with the idea of keeping efficiency high and maintenance low . . . your best chance of finding it is by going to the firm that has *experience*.

For many years, I. B. Williams & Sons have been producing, in their Cocheco brand, belting that is ideally suited for textile machine drives. Cocheco has all the advantages of leather belting — superior traction, ability to handle shock loads, longer life — plus a known record of successful installations.

A substantial stock of various weights and widths is maintained in the "heart" of the textile industry . . . Greenville, S. C. Service is keyed to the demands of the textile industry. Quick shipments and the close personal attention of its Greenville representative are evidence of that.

For textile belting, Samson hair-on check straps and loom leathers, consult —

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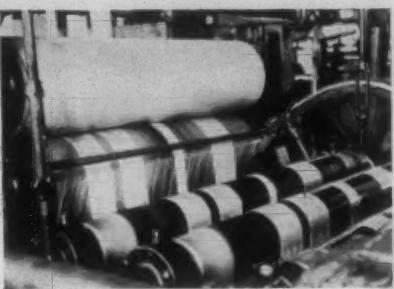
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STEEL ROLLS
FLYER PRESSERS
CARD ROOM SPINDLES
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FLY FRAMES
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ALL KINDS OF TEXTILE
MACHINERY

SOUTHERN SPINDLE & FLYER CO., Inc.

We Manufacture,
Overhaul and Repair Cotton Mill Machinery
CHARLOTTE, N. C.
W. H. MONTY, Pres. and Treas.

ordnance, industrial and surgical tapes, Navy shirts, Army shorts and laminated plastics for military use.

The 68 x 72 print cloth of normal times, and the 64 x 60 print cloth have both been ordered reduced as to count to 68 x 64 and 64 x 56, respectively, also under WPB order. The making of 68 x 72s or 64 x 60s is barred, except under specific appeal presumably for some military purpose. Mills have no choice in this matter; they take their orders from Washington which initiated the program of cut constructions so as to increase yardage by faster weaving.

When clip spot marquisette mills had satisfied the military requirements for insect netting, they undertook to resume the manufacture of marquisettes. Costs, however, were above OPA ceiling prices and relief was not readily obtained. The mills, therefore, continued to make insect netting, and consumers who needed curtains were obliged to purchase this higher priced fabric as a substitute for the lower price marquisettes.

Part of the shift has been induced by the demands of the consumer. As a result of the great increase in purchasing power, consumers have been "trading up," that is, buying a higher quality of merchandise than was formerly purchased. According to the "Cost of Living Index" of the Bureau of Labor Statistics, Feb. 25, 1944, "Merchants generally report that buyers are demanding better quality and more expensive goods." The market demand for high count goods is as strong as the demand for low count goods. There has been from the American public just as determined an insistence for the finer qualities as for the lower constructions.

American consumers have accepted the shortages of electric irons, toasters, and of certain foods as part of the sacrifice the nation must make to win the war. They have also learned to accept the utter lack of silk and nylon products, especially hosiery. What they have frequently overlooked is that the cotton industry has made and is making a gigantic contribution to the war effort, a contribution on a par with the steel, shipbuilding, aircraft and ordnance industries.

Notwithstanding the enormous wartime drain on its productive power, the cotton industry over three tumultuous years has managed to keep consumers supplied with those cotton which are so essential to the American standard of living.

Once the staggering demands for the final, all-out assaults on Germany and Japan are met, the industry will again be ready to turn its great productive skill to the manufacture of the articles that will be needed in the building up of the post-war world.

Out of its strenuous efforts to meet the emergencies of war will flow a host of new products that will reflect the dramatic technological advances forced by the stress of war. The industry only asks that consumers be patient, that they buy only what they need and conserve what they have until victory is measurably in sight.

PACKAGE DYEING AND BLEACHING

All Type Colors on Cotton Yarns

PIEDMONT PROCESSING CO., Belmont, N. C.

A.S.T.M. Annual Meeting Features Address On Textile Fibers

With a record-breaking registration of members and visitors, totaling 2,063, 16 formal technical sessions with several informal round tables, more than 250 meetings of technical committees, and a large number of actions on specifications and tests for materials, including over 50 new standards, the 47th annual meeting of the American Society for Testing Materials was deemed a notable one. Held in New York over a five-day period, June 26-30, the meetings provided an opportunity for the country's leading materials technologists to convene and discuss important problems bearing on the country's industrial and war efforts.

One feature of the meeting was the 19th Marburg lecture on "Textile Fibers—An Engineering Approach to an Understanding of Their Properties and Utilization," by Dr. Harold DeWitt Smith, treasurer of A. M. Tenney Associates. In his lecture, which was of interest to textile technologists and to materials engineers generally, Dr. Smith stressed the importance of an engineering approach to properties in utilization of fibers. Broadly he covered two purposes—the first providing the non-textile men with information about fibers as engineering materials stressing the necessity of realizing that the mechanical behavior of these tiny microscopic beams which we call textile fibers, is of primary importance alike to the strength of a hawser or a pneumatic tire, the comfort of an overcoat or of a summer suit, the utility of a carpet or a child's play dress, and, last and most important, the elegance and beauty of a well-filled evening gown! Secondly, he wished to inspire the textile mind, whether it be that of the designer, the fabricator, or the technologist, with the new philosophy of textiles which has been created by the advent of manufactured fibers. The essence of this new philosophy is that fibers can be designed to meet specific textile wants. Textiles made of the 30-odd natural and present-day manufactured fibers occupy the foreground. Beyond this foreground is the wide and exciting horizon of the future in which the only real limitations on the variety and the characteristics of textile fabrics yet unborn will be the ability of the textile designer and technologist to help the fiber maker to understand what kinds of fibers are wanted. This is an engineering job for the engineer stands midway between the scientist and the craftsman.

Cotton Congress Hears C. K. Everett

C. K. Everett, director of merchandising for the Cotton-Textile Institute, Inc., told the Fifth Cotton Congress at Dallas, Tex., July 13 that new uses flowing out of the technological progress achieved by the cotton industry during the war period would open up substantial new outlets for the industry's products in the years immediately following the war.

Mr. Everett's talk preceded the showing of the special motion picture, "Cotton At War," produced by the War Department for distribution in the cotton manufacturing areas of this country. The speaker also explained that the Cotton-Textile Institute is now at work on four additional movie shorts which will be shown in the 1,200 mills of the industry beginning Aug. 1. These shorts will emphasize the necessity for stepping up production of cotton goods during the critical period ahead.



Read this if you have "Monday Morning" Band Trouble

In mills from Maine to Texas—damp weather, dry weather, and "Monday Morning" band trouble has been eliminated on over 850,000 spindles by the installation of Meadows Tension Pulleys. . . . Maintaining uniform tension at all times, they help you meet rigid specifications and eliminate rejects. . . . Easy to install—one pulley for each four spindles — no doffing of frames necessary for installation.



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For complete information on how MEADOWS Ball-Bearing TENSION PULLEYS can help you, write—

MEADOWS MANUFACTURING CO.

ATLANTA, GEORGIA

DRONSFIELD'S PATENT ATLAS BRAND EMERY FILLET



STOCKED BY
THE PRINCIPAL MILL SUPPLY HOUSES
AND CARD MAKERS

WENTWORTH Double Duty Travelers



Reg. U. S. P. O.

Hicks, American, Wilson, U. S. Standard

Last Longer, Make Stronger Yarn, Run Clear, preserve the SPINNING RING. The greatest improvement entering the spinning room since the advent of the HIGH SPEED SPINDLE.

NATIONAL—ETARTNEP FINISH
A New Chemical Treatment

Manufactured only by the

National Ring Traveler Co.

Pawtucket, R. I.

131 W. First Street, Charlotte, N. C.
L. EVERETT TAYLOR, So. Agent

Contract Termination Classes Initiated

A three-day course in war contract termination, the first of its kind offered jointly by a university and Federal procurement agencies, was opened at the University of Pennsylvania last month for a class of about 100. It is to be repeated for successive classes every Monday and Thursday. Co-operating with the University of Pennsylvania in the course, which includes 21 hours of classroom work and lectures, are the procurement agencies of the Army, Navy, Maritime Commission, War Production Board and the Smaller War Plants Corp.

The initial class which began the course on June 19 consisted of company officers in charge of contract termination who were invited to enroll by the various procurement agencies sponsoring it. The course is under the general direction of Dr. Victor S. Karabasz, associate professor of industry and educational director of the engineering, science and management war training program of the university. On the teaching staff are procurement officers of the Army and Navy and members of the faculty at Pennsylvania.

Serving on the planning committee for the course are Col. H. C. Kliber, chairman, and Lieut. Frances Rosser, both of the Philadelphia Quartermaster Depot; Capt. M. K. Magaw, Philadelphia Signal Corps—Procurement District; Lieut. P. M. Andress, Philadelphia Ordnance District; Lieut. (j.g.) E. V. W. Read, Navy Department—industrial readjustment branch; Edward P. Smith, instructor in war contract accounting at the university, and Dr. Karabasz.

Peanut Fiber Development Is Hailed

Development of a fiber from peanut protein which may provide a completely new type of fabric was announced at the National Peanut Council in session at Minneapolis, Minn., recently.

Dr. K. S. Markley of the U. S. Southern Research Laboratory at New Orleans, where research on the fiber has been carried on, told members of the council that the fiber is a silk-like type and can be used with wool and cotton or alone. The development, he said, has been carried through various stages to the point of weaving of cloth. He declared the fabric is equal to or superior to soybean and casein fibers.

The peanut protein fiber is made from peanut meal and is expected to provide a completely new outlet for peanut products, he said. Whether it will provide a competitor for present nylon, rayon and similar fabrics Dr. Markley was not prepared to say, stating various experiments in actual usage of the fiber and resulting fabric must still be carried on. Dr. Markley said vegetable oil experiments demonstrated peanut oil can be hydrogenated in such manner that it resembles olive oil with respect to physical and chemical properties required for its use as a textile lubricant.

Egyptian Flax Fiber Being Imported

Consideration is now being given to applications to import flax fiber from Egypt under General Imports Order M-63, the War Production Board said June 1. Applications may be made in the usual manner by submitting WPB Form 1041 to the textile, clothing and leather bureau of the War Production Board, Washington, D. C. Restrictions on the import of flax from Egypt have been in effect since mid-1942.

Special Pillow Cases of Coated Fabrics Aid Allergy Sufferers

Protection of allergic patients from bedding dusts is an important medical problem. Up until a few years ago inflated rubber mattresses and pillows were the only recourse. According to a prominent New York physician, true relief for many allergic patients is now possible through use of allergen-proof encasings for pillows, mattresses and box springs. These encasings are made of Du Pont "Fairprene" hospital sheeting, a cotton fabric coated with synthetic rubber. For this purpose, the coating is applied only to the underside.

This physician reports that two of his patients obtained immediate relief with the use of these encasings. One suffered from allergic rhinitis for many years and was very sensitive to dusts. The other had had a skin rash on her chin for about two years. At first it was thought that furs were responsible. However, a few days after covering her pillow with an allergen-proof encasing, the rash completely disappeared. When the special encasing is missing from her pillow, she reacts immediately with an itching sensation in the previously affected area.

These encasings made by Du Pont "Fairprene" are accepted by the Council on Physical Therapy of the American Medical Association, and are obtainable through a physician's recommendation.

Hercules Coating Materials Described

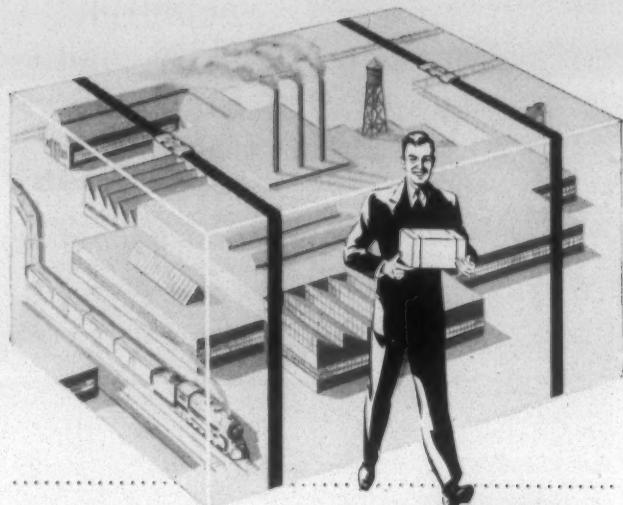
A new technical booklet describing the usual properties of Clorafin 42, plasticizer, and Clorafin 70, resin, used in the production of fireproof, waterproof and weatherproof coatings for fabrics, has been issued by the Hercules Powder Co. cellulose products department.

Clorafin 42, a light-amber, viscous, non-flammable plasticizer, is emulsified very easily. Recent tests show Clorafin 42 to be a good plasticizer for some of the vinyl resins. Clorafin 70 is a pale straw-colored, hard, brittle resin, with even greater flame-extinguishing characteristics. Present uses in addition to the formulation of flameproof coatings and waterproof coatings include the formulation of flameproof paints and flameproof adhesives. It is believed that Clorafin 70 will be useful in many applications where flameproofing qualities, hardness and stability are important because of its very good stability and compatibility with plasticizers and other resins. At the present time both Clorafin 42 and 70 are available to companies with a priority rating.

Institute To Back Philadelphia School

The Philadelphia Textile Institute Foundation, 230 South Broad Street, has applied to Philadelphia Common Pleas Court for a charter. The foundation is to contribute financial aid to the Philadelphia Textile Institute or any similar institutions.

Incorporators are Millard D. Brown, Jenkintown, Pa.; Alban Eavenson, Clarence L. Ederer, Melrose Park, Pa.; George W. Elliott, Joseph R. Grundy, Bristol, Pa.; Theodore B. Hayward, Riverton, N. J.; W. Lyle Holmes, Jr., Rydal, Pa.; Russell C. Osborne. Trustees are Messrs. Brown, Eavenson, Ederer, Osborne, M. Earle Heard of West Point, Ga., Albert N. Hogg of Villanova, Pa., Lewis A. Hird of Englewood, N. J., and Archie D. Swift of Wayne, Pa.



YOUR PACKAGE IS YOU TO YOUR CUSTOMERS

There it is in the shipping room . . . your product ready to represent the results of your ingenuity and skill. You want it to get to its destination ship-shape and sound—upon that condition depends your good will . . . your package is *you* to your customers.

At the end of the production line . . . Acme Steelstrap takes over . . . protects that precious package for shipment by rail, by sea, by truck or by air . . . "Bound to Get There" with Acme Steelstrap.

But Acme protection goes even further. Our advice on properly reinforced shipping packs may reduce weight and waste in container materials, reduce freight charges, prevent pilferage and damage claims . . . savings that pay the slight investment in Acme Steelstrap over and over again.

The list of Acme Steelstrap users reads like a "Blue Book" of American Industry, because these concerns realize their good names are worth protecting all along the shipping line.



DOC. STEELSTRAP is represented by Acme engineers—men whose business is the reinforcement of shipping packs—from single containers to car loads of freight.

Today, on every fighting front, there is evidence of Doc's skill—on cases, cartons and crates, on bales and on skid loads—on materiel and supplies from Army and Navy depots, from arsenals and from war industry. Strap has a full-time war assignment, part of a job that Uncle Sam calls "pack it right to reach the fight."

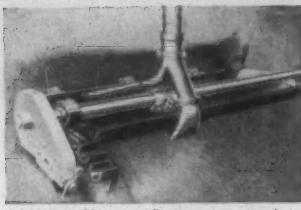
It's the same job that we have always called making shipments "Bound to Get There."

When his war work is finished, Doc. will be ready to discuss the possibilities of steel strapping reinforcements for your post-war business.

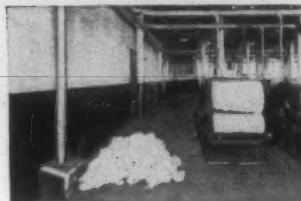


ACME STEEL COMPANY

2838 ARCHER AVENUE, CHICAGO 8, ILLINOIS



Abington Vacuum Stripper as used on revolving flat card, strips cylinder and doffer.



Waste Station used to collect flat strips, comber noil and other process waste.



Removing card underscreenings with cleaning down take.

ABINGTON VACUUM CARD STRIPPING

engineered to
your mill's needs

Our System is based on apparatus that strips 100% by vacuum, eliminating brush action on the delicate wires. It permits one worker to strip at the rate of 675 cards per 8-hr. shift. To this basically superior apparatus, we add individual engineering that suits the System exactly to your mill, assuring MAXIMUM benefits. In addition there are the advantages of—

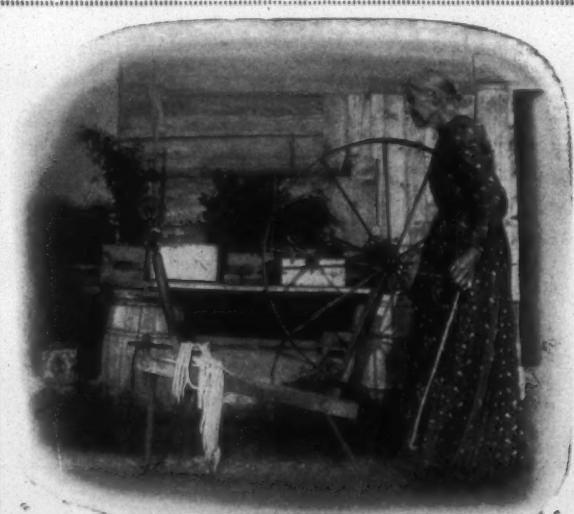
PROCESS WASTE COLLECTING

serving various machines and delivering all waste and sweeps to the central waste house.

REQUEST
STRIPPER CATALOG

ABINGTON

ABINGTON TEXTILE MCHY. WKS., ABINGTON, MASS.
Vacuum Card Strippers - Yarn Dyeing Systems - Weaver's Knotters
OFFICES AT BOSTON, MASS. • CHARLOTTE, N. C.



KNOXALL
ROLLER SLASHER AND CLEAVER CLOTH
SANFORIZING BLANKETS SLASHER JACKETS
ENDLESS REVOLVING CLEAVERS

EDWARD H. BEST & CO.
EST. 1888 BOSTON, MASS. INC. 1901
ATLANTA, GA. NEW YORK

W. C. HAMES H. W. Curtis
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Dearborn 5974 Allendale 3521

GREENVILLE, S. C.
RALPH GOSSETT—WILLIAM J. MOORE
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OBITUARY

Thomas C. Lanier, 66, who was until his retirement some time ago an overseer for National Yarn Mills, Inc., at Belmont, N. C., died early this month after an illness of several months.

Richard A. Springs, 88, oldest member of the New York Cotton Exchange, died recently in a New York hospital. He was an uncle of Col. Elliott Springs of Fort Mill, S. C., and Mrs. Stuart W. Cramer of Charlotte.

C. S. Cozart, 62, overseer of twisting at Edenton (N. C.) Cotton Mills for the past 13 years, died suddenly early this month.

John W. Bruyn, 75, for many years a leader in numerous phases of the cotton goods industry, died recently at his Brooklyn, N. Y., home.

Warren C. Steele, for many years a journalist with wide connections in the textile industry, died recently at his home in Philadelphia. At the time of his death he was head of the Philadelphia bureau of the *Journal of Commerce*.

William Beswick, 66, assistant to the president of Alabama Mills, Inc., at Birmingham, died recently in a Montgomery hospital. He was a native of England.

James A. Willard, 72, widely known in the textile machinery field, died recently at his home in Greensboro, N. C., following several weeks' illness.

J. Scott Wannamaker, 76, president of the American Cotton Association, banker and planter of St. Matthews, S. C., died recently at Orangeburg, S. C.

William C. Deininger, 59, co-manager of the Charlotte division of New England Waste Co. for some 25 years, died recently at his home.

Curry Watson, 42, manager of the new products division of Corn Products Sales Co., and recently in charge of sales for the company's chemical division, died June 30 at Easthampton, Long Island, N. Y. He had been in close contact with the textile industry during 11 years with Corn Products Sales Co.

Wanton Gladding, father of William E. Gladding, general manager of the DuPont nylon plant at Martinsville, Va., died recently at the home of his son. He was also the uncle of Ernest K. Gladding, manager of the DuPont nylon division.

Evans H. Cox, 52, manager of the Charlotte branch of Westinghouse Electric and Mfg. Co., died recently after a short illness.

Norane, Impregnole's New Water-Repellent, Being Promoted Widely

Finishers, converters, manufacturers and retailers opened their mail recently and discovered a lively baby turtle with the brief message "Meet Mr. Norane" inscribed on its shell. This widespread mailing of "Mr. Norane" marked the first splash in the tide of promotion that will dramatize Norane, the durable water-repellent made by Impregnole Corp., subsidiary of Warwick Chemical Co. Its repercussions were evidenced throughout the trade, stimulating interest, talk and anticipation. From all indications it was a striking, forthright way to introduce the symbol of Norane to the water-repellent field, to familiarize it with the sprightly turtle whose hardy shell is synonymous with water-repellency and durability. Impregnole Corp. quickly followed it up with other interest-sustaining and heightening features, finally reaching a climax with a colorful impressively large folder divulging the complete story of Norane. Examples

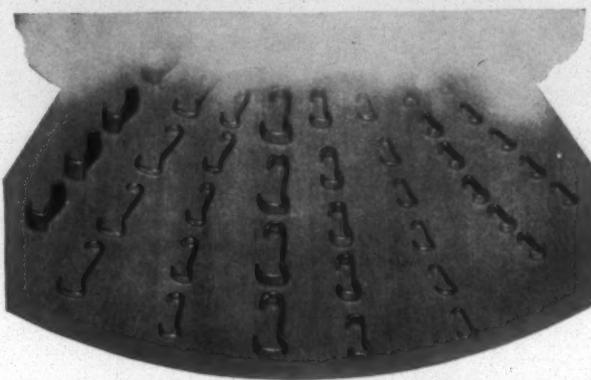


of this material, the first phase in Norane's ambitious promotion plan, are shown in the accompanying illustration.

Further attention-compelling, refreshing promotions are being lineup, and the Impregnole Corp. promises to do as successful a job for Norane as is being accomplished for Impregnole. Its purpose is to make the Norane turtle as thoroughly recognized throughout the rain and sportswear field as the Impregnole seal. A string of advertisements in all available trade papers and magazines, and continuing direct mail features are in the immediate offing.

The theme of the Norane promotion is emphasis on its laboratory certification plan which underscores the double plus value of Norane . . . the essential fact that Norane is laboratory tested for water-repellency, and laboratory tested for durability . . . certified for efficiency after repeated washings or dry cleanings . . . and that it conforms to every government specification for durable repellency.

Quality STRAIGHT ON THROUGH



The ABC LINE of SPINNING & TWISTER TRAVELERS

After more than two and a half years of war and its priority demands on men, materials and tools, we took occasion to check back—compare Carter Travelers being produced today, with those of three years ago.

On every count—we are making a *better* product today.

This has not been as easy as it sounds, but—to our way of thinking, what good is any traveler if it isn't the best you can buy?



CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
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R. D. HUGHES SALES CO., 1812 MAIN STREET, DALLAS, TEXAS
Eastern (Including Canada) C. E. HERRICK, 44 FRANKLIN STREET,
PROVIDENCE, RHODE ISLAND

European: MELLOR, BROMLEY & CO., LTD., LEICESTER, ENGLAND
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EASIER OPERATION
of
Folding Machines
with the
LEWIS
AIR LIFT

WOMEN can operate most folding machines if equipped with Lewis Air Lift. This Lift eliminates the conventional foot treadle and the heavy work of raising the folding machine table — an especially difficult operation on folders of larger than 4 or 5 in. capacity.

With the Lewis Air Lift, compressed air does the work. Where air is not available, we can supply a compressor.

Ask us more about it!

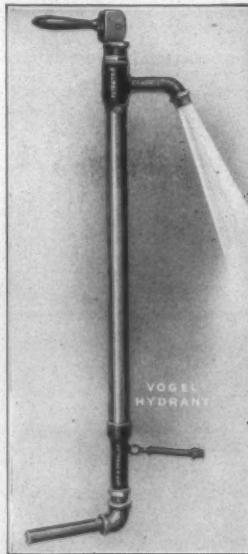
difficult operation on folders of larger than 4 or 5 in. capacity.

With the Lewis Air Lift, compressed air does the work. Where air is not available, we can supply a compressor.

Ask us more about it!

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS.

Remember the name



VOGEL FROST-PROOF HYDRANT
Running water every day of the year. Will never freeze when properly installed. Nearly 100,000 in use.

"VOGEL"

Yes, remember it well because it is a symbol of satisfaction among customers and plumbers alike.

Vogel Frost-Proof Hydrants are serving the war effort throughout the Nation—in war plants of all kinds, in shipyards and on thousands of farms ... And they are serving in the traditional Vogel way —economically and dependably—day in and day out.

JOSEPH A. VOGEL COMPANY

WILMINGTON 99, DELAWARE

Textile Research Institute Seeks Members

The research fund committee of the Textile Research Institute met last month at a luncheon held in connection with the current membership drive of the institute where a report on the future aspects of the campaign and a survey of the results achieved thus far were discussed.

Dr. Harold De Witt Smith addressed the meeting on the plans to further the steps being taken to completely the recently acquired property of the Textile Research Institute at Princeton, N. J., into laboratories for the conduction of industry-wide research.

The principal speakers at the luncheon held at the University Club of New York June 29 were Albert L. Scott, head of Lockwood Greene Engineers, Inc., who is chairman of the committee, and Dr. Harold De Witt Smith, treasurer of the A. M. Tenney Associates, Inc., who is chairman of the committee in charge of the conversion plans of the Princeton property. Others present included John Bancroft, Jr., president, Joseph Bancroft & Sons Co.; John B. Clark, president, Clark Thread Co.; Marland C. Hobbs, vice-president, Arlington Mills; John A. Sweetser, president, Bigelow-Sanford Carpet Co., Inc.; and Maj. D. B. MacMaster, who is acting as director of the research fund committee.

Scarcity of Coated Fabrics Ahead

Because of the critically short supplies of phthalic anhydride used in the production of plasticizers for pyroxylin and vinyl resin coated fabrics, military end uses for these coated fabrics had to be cut for the month of July, according to the War Production Board. None will be available during this period for civilian requirements, WPB stated.

The pyroxylin and vinyl resin coated fabric industry advisory committee at a meeting held in Washington suggested that the chemicals bureau prepare a list of plasticizers made from other than phthalic anhydride that are available in order to complete military requirements and partially satisfy civilian needs for baby crib sheeting, hospital sheeting, shoes, shower curtains and rainwear. Representatives of the chemicals bureau told the committee that such a list would be available in the near future.

A representative of the textile division informed the committee that production of textiles is expected to be somewhat less in the third quarter than in the second, but somewhat greater in the fourth quarter. The industry reported a shortage of fabrics for civilian requirements.

Rope Fiber Restrictions Removed

All restrictions on the use of istle, except F. A. Q. (fair average quality) palma and pita, have been removed, the cordage branch of the War Production Board has reported. This action, taken with amendment to Order M-138, removes controls on the use of higher grades of palma or pita, or on any quality of juamave or tula. Under the new amendment, F. A. Q. pita may be used in the manufacture of rope, any product for Army, Navy, United States Maritime Commission or the War Shipping Administration, and for any product for which it may be allocated by WPB. F. A. Q. palma may, in addition to the same uses, be produced into wrapping twine, but its use for all permitted products for any one manufacturer in any calendar month may not be more than 16 2/3 per cent of the quantity used from Jan. 1 to March 31, 1944.

Research Appointments Made in Du Pont Rayon Department

Appointment of Dr. William W. Watkins as research manager to head the organic chemistry activities in the pioneering research laboratory of the Du Pont rayon department at Buffalo, N. Y., has been announced. Dr. Watkins, who has been a research supervisor, joined the pioneering research staff in 1936 following graduate study at Harvard University, where he obtained his Ph.D. degree in chemistry. He is a native of Cleveland, Ohio, and a graduate of Ohio Wesleyan.

Several other promotions in the organic research section of pioneering research were also announced. Dr. R. C. Houtz, who has been a group leader, is named research supervisor in one phase of organic chemistry. Dr. Houtz was born in Springville, Utah, is a graduate of Brigham Young University, and obtained his doctor's degree in chemistry at the University of Wisconsin in 1932. He joined Du Pont the next year.

Heading another phase of organic chemistry as research supervisor is Dr. Robert A. Scheiderbauer, who has been a group leader. Dr. Scheiderbauer, formerly of St. Paul, Minn., took his undergraduate work at St. Thomas College at St. Paul and his graduate work at the University of Minnesota. He has been with Du Pont since 1941.

Dr. Emmett Izard was promoted from research chemist to research supervisor in charge of exploratory work in organic and cellulose chemistry. Dr. Izard was born in Hazlehurst, Miss., obtained his bachelor's degree at Mississippi College and his doctor's degree in physical chemistry at the Massachusetts Institute of Technology in 1929, in which year he joined Du Pont.

The pioneering research section, of which Dr. W. Hale Charch is director, devotes itself to scouting work in research and process development in the field of synthetic fibers and films. It is part of the technical division of the rayon department.

New Camouflage Head Net Developed

A new type of cotton netting in an open mesh weave for use as a camouflage head net with the steel helmet and plastic helmet liner has been designed by the Quartermaster Corps and the Corps of Engineers, the War Department reports.

The netting is a modification of a type developed by the engineers for camouflaging field guns and artillery emplacements in theaters of operation, and like the earlier type, can be manufactured on lace making machines and certain kinds of knitting machines. It has an elastic band attached to the net fabric which fits over the helmet liner and holds the net in place, while the net itself drapes over the outer steel helmet in a manner similar to a veil on a woman's hat. The ends hang down to cover either the face or the back of the head and neck to break up their characteristic outline. It can, of course, be worn with either the helmet or liner alone.

The mesh is large enough to permit placing leaves or twigs in the openings to conform to the coloration of surrounding vegetation. The net is treated with a mildew-proofing agent to prolong its life in damp weather and is small enough and pliable enough to be carried in the pocket when not needed.



Photo Courtesy Pepperell Mfg. Co.



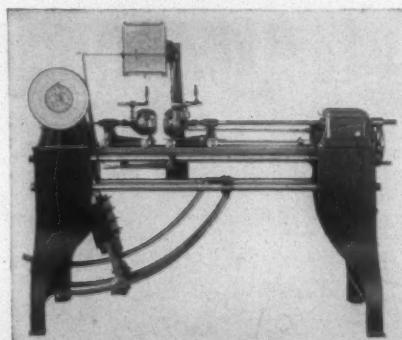
We make all types of holders

Modern rings permit frames to turn out more work

Spinning and twisting is bound to run better after replacing worn rings with new DIAMOND FINISH. From this alone, production gains often are surprisingly large. Rings are repairs — make the most of 'em!

WHITINSVILLE (MASS.)

SPINNING RING CO.
Makers of Spinning and Twister Rings since 1873



Specialists
in
Textile
Testers

Model Q-3. Capacity 2,000 lbs. tensile. For testing duck, webbing, shroud cords, twine, etc. Extra heavy construction to stand up under 'round-the-clock production testing.'

SCOTT TESTERS

* Registered
Trademark

Scott has pioneered various testers now standard in the textile industry. Our 60 models include machines for tensile, hysteresis, burst, flexing, twist, crepeage, etc., etc., from single hair to 1 ton.

HENRY L. SCOTT CO. 115 Blackstone St.
Providence, R. I.

SOUTHERN REPRESENTATIVE **JOHN KLINCK** 304 FOREST AVENUE
AUGUSTA, GEORGIA

Standard of the World

BARNES TEXTILE ASSOCIATES, Inc.

CONSULTING ENGINEERS TO THE TEXTILE INDUSTRY FOR OVER 30 YEARS

OPERATING METHODS
MECHANICAL SURVEY
COST METHODS

PRACTICAL BUDGETS
CREATIVE COUNSEL
SPECIAL PROBLEMS

10 High Street - - - - Boston, Mass.
318 Montgomery Bldg. - Spartanburg, S. C.



Leather Belting

all types

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Textile Firms Get Advertising Awards

The Manhattan Rubber Mfg. Division of Raybestos-Manhattan, Inc., Passaic, N. J., received the National Advertising Agencies Network first award for its employee relations program at a recent conference of the N.A.A.N.

The employee relations program covers company publicity and other promotional activities dealing with employee and servicemen relations, and includes: *Manhattan Service News*, war bond and other drives, victory gardens, Christmas packages to servicemen, safety bulletins, conservation, employee's war exhibits, absenteeism and others.

This company was awarded second prize for this program last year, and received first prize for best business paper advertising campaign for the past three consecutive years. The company has the Army-Navy "E" with star and Treasury "T." Last year it also received the highest award from the National Victory Garden Institute for its victory garden project.

A textile machinery manufacturer and a textile engineer also received awards during the annual competition. They are: J. E. Sirrine & Co., of Greenville, S. C., and Fidelity Machine Co. of Philadelphia, both clients of the Roland G. E. Ullman organization of Philadelphia.

Sirrine won second place for the best use of art illustrations and typography and third place in the general magazine campaign. In the latter, the firm headed all ads with quotations from Shakespeare. Fidelity won honorable mention in the business paper campaign. About 800 clients of the 30 participating agencies were entered in the contest.

Means Sought To Re-open School

A committee to study means of reviving the textile school at Alabama Polytechnic Institute at Auburn was authorized by the executive board of the Alabama Cotton Manufacturers Association at a recent meeting at Birmingham. The school was forced to close several weeks ago for lack of instructors. The college desires to re-open it and one of the tasks of the committee will be to assist the college in obtaining instructors.

George Elliott of Huntsville, president of the association, presided over the meeting and heard Hugh Comer, president of Avondale Mills, explain the wartime program under which the textile school at Auburn had operated successfully for about a year before having to close down. Under the wartime program, which Mr. Comer had helped to formulate, students for the textile school were recruited from Alabama cotton mills for technical courses of eight weeks' duration and returned to their respective plants for upgrading.

Calco Forms New Pigment Department

A new department has been formed by the Calco Chemical Division of American Cyanamid Co. to handle all products formerly sold by Calco and the United Color and Pigment Department to the pigment consuming industries, it has been made known.

Included will be Unitane (titanium dioxide) and other products of the Virginia Chemical Corp., whose facilities have just been acquired. John Allegaert has been appointed manager of the pigment department, with Loe Sklar as manager of sales. Dr. R. A. Shive has been appointed director of technical service.

Means Sought To Increase Brazilian Textile Output

An important step toward easing the present acute world shortage of cotton textiles has been taken through discussions held by a Brazilian mission headed by Dr. J. S. Maciel Filho, with officials of the Combined Production and Resources Board, it has been announced. A series of highly successful meetings has been held in Washington during the last fortnight, climaxed by an official ceremony at which the record of the understandings reached was presented to Dr. Filho jointly by William L. Batt, Sir Henry Self and George C. Bateman, deputy members of the Combined Board for the United States, United Kingdom and Canada, respectively, CPRB reported. Philip O. Chalmers, representing the division of Brazilian affairs of the State Department; Deputy Director General Roy F. Hendrickson of the United Nations Relief and Rehabilitation Administration, and Sidney H. Scheuer, executive director of the bureau of supplies of the Foreign Economic Administration, were also present.

In the course of these meetings the critical world shortage of cotton textiles was reviewed in detail. On behalf of the Brazilian Government, the Brazilian mission indicated that Brazil would make every effort to increase its exports of cotton textiles in the interest of the joint war effort of the United Nations, CPRB said. A broad program was worked out under which it is hoped, the board said, that Brazil will supply a substantial portion of the needs of those areas in which the present lack of textiles is most acute. It is also contemplated that Brazil may supply a considerable volume of cotton goods through the United Nations Relief and Rehabilitation Administration for European Relief. As a result of these conferences, which grew out of an invitation to the Brazilian Government from the Combined Production and Resources Board, it will now be possible to coordinate more effectively the cotton textile exports of Brazil with those of the United States, the United Kingdom, Canada, India and Mexico. The Combined Production and Resources Board has offered to assist the Brazilian Government in every way possible in the furtherance of this program.

The Brazilian Textile Mission, headed by Dr. Maciel, personal representative of President Vargas, included: Dr. Silvio Brand Correa, delegate; Dr. Eneas G. Mascarenhas and Dr. Vincents de Paulo Galliez, advisors; Dr. Arthur M. Pontes Miranda, secretary; and Gilberto L. Landsberg, secretary-interpreter. The Brazilian Government was represented through its embassy by the minister in charge of commercial affairs, Dr. Walter L. Sarmanho, and Vice Consul Aluysio Guedes Regis Bittencourt.

New Selling Agency Is Formed

Piedmont Southern Co., 40 Worth Street, New York, has been organized to act as selling agent for Pilot Mills Co. of Raleigh, N. C., and Pomona Mfg. Co. of Greensboro, N. C. The announcement was made by Norman S. Greenlaw, Frank Buckley, Kendrick J. Hurley and C. M. Gabbett, Jr.

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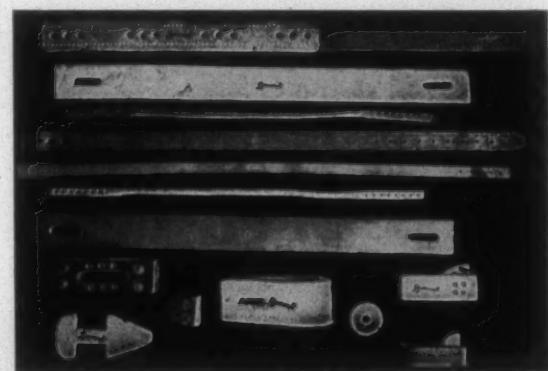


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ABINGTON TEXTILE MACHINERY WORKS, Abington, Mass. Of- fices at Boston, Mass., and Charlotte, N. C.

ACME STEEL CO., 2888 Archer Ave., Chicago, Ill. Sou. Office and Warehouse, 608 Stewart Ave., S.W., Atlanta, Ga., F. H. Webb, Dist. Mgr. Sou. Sales Reps.: C. A. Carroll, 528 Clairmont Ave., Decatur, Ga., Phone Dearborn 6267; Marcus M. Brown, 1231 Lexington Ave. (Phone 8583), Charlotte, N. C.; William G. Polley, 937 Cherokee Lane, Signal Mountain, Tenn., Phone Chattanooga 8-2635; John C. Brill, 309 Magazine St., New Orleans, La., Phone Magnolia 5859. Warehouses at Atlanta, Ga., Greenville, S. C., New Orleans, La.

AKRON BELTING CO., THE, Akron, O. Sou. Reps.: Ralph Gossett and Wm. J. Moore, 15 Augusta St., Greenville, S. C.; The Akron Belt- ing Co., 406 S. 2nd St., Memphis, Tenn.

ALLEN CO., 440 River Road, New Bedford, Mass. Sou. Repr.: L. E. Wooten, Fort Mill, S. C.

AMERICAN BLOWER CORP., P. O. Box 58, Roosevelt Park Annex, Detroit, Mich.; 7 N. 6th St., Richmond, Va.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Room 714, 101 Marietta St. Bldg., Atlanta, Ga.; Room 809, Jahncke Bldg., 810 Howard Ave., New Orleans, La.; 819 Texas Bank Bldg., Dallas, Tex.; 312 Keller Bldg., Houston, Tex.

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AMERICAN MOISTENING CO., Providence, R. I. Sou. Plants, Charlotte, N. C., and Atlanta, Ga.

AMERICAN VISCOSE CO., 350 Fifth Ave., New York City. Sou. Office, Johnston Bldg., Charlotte, N. C.; Harry L. Dalton, Mgr.

ARKANSAS CO., Inc., P. O. Box 210, Newark, N. J. Sou. Repr.: Jasper M. Brown, 1204 Greenwood Cliff, Charlotte, N. C.

ARMSTRONG CORK CO., Industrial Div., Textile Products Section, Lancaster, Pa. Sou. Office, 38 Norwood Place, Greenville, S. C. J. V. Ashley, Sou. Dist. Mgr.

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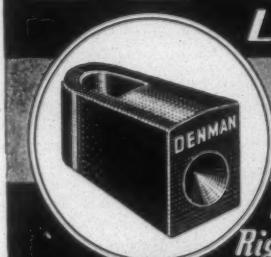
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